2016 Cancer Incidence and Mortality in North Carolina

State Center for Health Statistics

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Contributing Editors

Sohrab Ali, MPH, MIS, M.A.

Soundarya Radhakrishnan, M.S.

STATE OF NORTH CAROLINA

Roy Cooper, Governor

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Mandy Cohen, M.D., MPH, Secretary

DIVISION OF PUBLIC HEALTH

Mark T. Benton, Assistant Secretary for Public Health

STATE CENTER FOR HEALTH STATISTICS

Delton Atkinson, Interim Director

CENTRAL CANCER REGISTRY

Chandrika Rao, Ph.D., Director

www.ncdhhs.gov

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Introduction

Cancer is a group of diseases in which there is an uncontrolled growth of abnormal cells in a part of the body. One out of every two men and one out of every three women in the United States will develop cancer during their lifetimes.[1] In 2016, cancer was the leading cause of death in North Carolina.[2] In order to determine the effect cancer has on the state's population, the North Carolina Central Cancer Registry (CCR) collects, compiles and tabulates data regarding the occurrence of cancer and reports the deaths due to cancer within the state. This report is a summary of the incidence and mortality due to cancer with the most complete and recent data the CCR has available.

Background

The CCR, located in the State Center for Health Statistics (SCHS), was established in 1986. The CCR operates under the authority granted in North Carolina General Statute 130A-208.[3] Legislation declaring cancer reporting to be mandatory in North Carolina became effective in 1947. Authorized funding for establishing a registry, however, was not appropriated until 1986. Between 1986 and 1989, only 50-60 percent of the cases were reported each year. The first year for which relatively complete statewide reporting was achieved was 1990. In 1999, new legislation was passed that requires every healthcare provider that detects, diagnoses or treats cancer cases to report all cases to the CCR.[3]

On a national level, the CCR reports data to the North American Association of Central Cancer Registries (NAACCR)[4] and the Centers for Disease Control and Prevention National Program of Cancer Registries (NPCR)[5]. Both organizations annually review the data the CCR submits, for completeness, quality and timeliness. Completeness is the percentage of cases reported. Having high quality data ensures that there are not duplicate records per case and that certain data variables are accurate and complete. In order to meet the timeliness requirement, the data must be submitted within 23 months of the completion of the diagnosis year under review. For the last nine years, the CCR has achieved the NAACCR Gold Standard for Registry Certification. This certification is the highest NAACCR standard awarded for completeness, quality and timeliness of data. The CCR continues to meet the requirements for NPCR in order to receive funding and to have data publicized nationally.

Purpose

As a population-based registry, the CCR collects, analyzes and disseminates information on the occurrence of cancer in North Carolina. The data collected include patient demographics (e.g., race, gender and age) and medical information on each cancer diagnosis (e.g., primary site, morphology, stage and first course of treatment). This information is used to improve cancer treatment and identify groups that have higher incidence and mortality from cancer.[6] The CCR preserves the confidentiality of information obtained for medical, educational, research and statistical purposes. No identifying information regarding patients, hospitals or physicians is released except under the conditions specified in General Statute and North Carolina Administrative Code.[3]

2016 Cancer Incidence and Mortality in North Carolina is the 23nd annual report of the CCR. The contents of this report represent a summary of the information collected on cancer diagnoses and deaths in 2016. The information includes incidence and mortality counts and rates for all cancers

by county, race, gender and age. The primary goal of this report is to provide cancer data to healthcare planners, researchers and the general public.

Data Sources and Collection

Healthcare providers who detect, diagnose and treat cancer report cases to the CCR. The CCR receives data on death due to cancer from the Vital Records (VR) Branch, also located in the SCHS. The data are coded according to standard procedures and guidelines.

Cancer Incidence

Cancer incidence is the number of newly diagnosed cancer cases, not including recurrences, during a particular time period within a certain population. With each cancer diagnosis or treatment, the healthcare providers report the case to the CCR within six months. The CCR releases data approximately two years after the end of the diagnosis year, due to reporting delay, consolidation of records and cleaning of files.

From each case, the CCR collects patient demographics and medical information on the cancer diagnosis. Some demographics the CCR receives regarding an individual diagnosed with cancer include race, ethnicity, gender, age and residence. In addition, the CCR gathers data such as the first location of the cancer (primary site), the form of cancer (morphology), tumor size and the spread of the cancer (stage). Data regarding first course of treatment and vital status are also collected.

The CCR receives the majority of the cancer incidence data from healthcare facilities (hospitals, cancer centers, dermatology centers, urology centers and surgical oncology centers). Incidence data also come from physician offices, pathology reports, interstate data exchange, nursing facilities and death clearance cases. At present, there are 126 hospitals which routinely diagnose and treat cancer patients. Of these, 86 have tumor registries where the data are abstracted and submitted to the CCR, 1 men's federal prison, 1 men's state prison, 1 women's state prison, 4 Veterans Affairs (VA) hospitals and 4 Department of Defense (DoD) facilities. Also, there are 169 physician offices and clinics, as well as 56 pathology laboratories in North Carolina reporting to the CCR. Death Clearance is a process of linking the death certificates with the cancer incidence data to identify cancer cases that may have been missed through regular reporting. For 2016 diagnosis year, the CCR received 86,735 reports from over 230 facilities .

Cancer Mortality

Cancer mortality is the number of deaths due to cancer during a specified time period within a certain population. Death certificates are filed to a county health director within five days. The death certificate is then passed on to VR on the fifth day of the following month.[3]

Once a year, VR provides the CCR with data on the deceased whose primary cause of death is cancer. This information includes demographics on the deceased including race, ethnicity, gender, age and residence. In addition to demographics, a primary cause of death and date of death are also collected.

Differences in Collecting Incidence and Mortality

For many studies, the CCR examines both incidence and mortality. Therefore, it is important to note differences in obtaining incidence data and mortality data. These differences include, but are not limited to, timeliness in reporting (both in state and out-of-state cases) and case finding.
There is a difference in the timeliness of reporting incidence and mortality data of cases reported in the state for North Carolina residents. For incidence data, the healthcare facility is supposed to report the case to the CCR within six months. However, with mortality data, a report of each death is submitted to the VR within two months.

Some people living near neighboring states go outside North Carolina for health care. Also, people may get diagnosed with or die of cancer outside of the state. North Carolina has an exchange agreement for cancer incidence data with 37 states and Washington, D.C., including its border states of Virginia, Tennessee and South Carolina. In addition, North Carolina has an exchange agreement with the other 49 states, as well as with Washington, D.C., and United States territories, for exchanging death certificates. Typically, incidence data are exchanged twice a year while mortality data, monitored by the National Center for Health Statistics (NCHS), are exchanged between states within two months of a death. However, even with these exchange agreements in place, delays or omissions can occur in the interchange of incidence and mortality records.

Although new cancer cases are required by law to be reported to the CCR, there are many that are not. Cases diagnosed in small hospitals that do not have a cancer registry may be under reported. Physicians associated with a large hospital will often report cases via a hospital registrar, but those not affiliated with a hospital may not have ample staff to report cases to the CCR. In the last few years, more cases are being diagnosed and treated in physician offices or surgical oncology centers and may never be referred to an oncologist nor be reported. The CCR has improved the completeness of reporting by recruiting physician offices and pathology laboratories as well as sending staff to smaller facilities to collect the required data. Despite the efforts of the CCR, incidence data are considered to be incomplete. On the other hand, death data are regarded as complete. Therefore, there may appear to be an excess of deaths compared to the number of cases for some cancers in rural counties.

Cancer Classification

The CCR receives an abstract of each medical record from a reporting facility. Each abstract contains specific medical information about the cancer. The cancers are categorized using codes according to the *International Classification of Diseases for Oncology, Third Edition.*[7] Each code is comprised of two pieces: topography and morphology. The topography code tells where the tumor began (primary site). The morphology code tells the type of cell (histology), the way it behaves within the body (behavior) and supplementary information about the tumor (grade). Care must be taken when coding lymphomas and leukemia.

The medical record also contains data regarding the cancer stage. The stage at diagnosis indicates how far the cancer has spread when it is first diagnosed. Knowing the extent of the cancer is important in treatment and prognosis. The CCR commonly uses National Cancer Institute's Surveillance, Epidemiology, and End Results Program[8] definitions for staging and groups cancers as in situ, local, regional, distant and unknown.

In the data collected by the CCR, only malignant tumors are included with one exception. Data on benign brain and central nervous system tumors are also reported to the CCR. Only malignant tumors are included in this report. In situ cases are generally reportable to the CCR. However, these tumors, with the exception of in situ breast and bladder cases, are not used in cancer surveillance or in cancer incidence statistics. Data on basal and squamous cell skin cancers are not collected by the CCR unless they have spread to tissue beyond the original site. Malignant melanoma may occur at many different body sites; however, this report focuses on melanoma of the skin.

Statistical Methods

Populations not only vary in size, but also in their racial, gender and age breakups. Thus, the counts of cancer incidence and mortality have limitations when comparisons are needed.

Rates are used to show the risk of an event occurring in a population and the CCR presents rates per 100,000 persons. The CCR calculates rates for both incidence and mortality data. A crude rate is found by dividing the number of events (e.g., cancer cases or deaths) for a population of interest in a specified time period by the population of interest at risk during the same time period. This ratio is then multiplied by 100,000 to express it as a rate per 100,000 persons. A crude rate can be expressed as

$$crude\,rate = \frac{count\ of\ events\ for\ a\ population\ of\ interest}{population\ of\ interest\ at\ risk} \times 100{,}000.$$

Crude incidence and mortality rates for 2016 used the population estimates obtained from the NCHS. Incidence reports published by the CCR prior to 2006 were calculated using the State Demographer's population estimates. Hence, rates from reports prior to 2006 are not comparable to rates in this report.

Age-Specific Rates

An age-specific rate is an example of a crude rate where the population of interest is a specific age group. For age group *i*, an age-specific rate can be calculated as

$$age\text{-}specific\ rate_i = \frac{count\,of\ events\ for\,age\,group_i}{population\ of\ age group_i\ at\ risk} \times 100{,}000.$$

A typical way to divide age groups is in five-year increments (0-4, 5-9, …, 80-84, 85+). In this report, the ages are grouped as 0 to 19 (pediatrics), 20 to 44 (young adults), 45 to 64 (middle-aged adults) and 65 and older (senior adults).

Age-specific rates are used to examine the burden cancer has on a particular age group and to determine the need for services for a given population. In addition, they can be used to compare different population groups of the same age and notice the effect that cancer has on the various populations. Within a population, age-specific rates can be used to examine how cancer burden differs among age groups.

Age-Adjusted Rates

The occurrence of an event may vary with age, and the age structure of a population can vary as well. Therefore, age-specific rates are not always useful for comparisons and as a result must be adjusted to account for these differences. An age-adjusted rate is a weighted average of the age-

specific rates expressed as a rate per 100,000 persons. Age-adjusted rates should be used only if the same standard population is used for computing weights. The standard population provides the proportion of the population in specific age groups and includes information regarding age, but not race, sex or geographic location. The standard population the CCR uses is the 2000 United States Census population.

To calculate age-adjusted rates, multiply each age-specific rate by the proportion of individuals in that age group in the standard population. For example, for age group *i*,

$$weighted\ rate_i = age\text{-}specific\ rate_i \times \frac{standard\ population\ in\ age\ group_i}{total\ standard\ population}.$$

The age-adjusted rate is the sum of all the weighted age-specific rates. For *n* age groups the age adjusted rate is

$$age\text{-}adjusted\ rate = weighted\ rate_1 + weighted\ rate_2 + \cdots + weighted\ rate_n.$$

An age-adjusted rate allows comparison between populations of different age groups, time periods and/or geographic areas. Age-adjusting ensures that discrepancies in rates of various populations are not a result of differences in age distributions.

Gender-Specific Rates

In addition to computing rates by age, rates can be computed by gender. For both incidence and mortality, gender data are collected by the CCR and VR, respectively. Gender-specific rates are used for comparison between different population groups of the same gender and to examine how cancer tendencies differ between males and females. Gender-specific rates are also used when calculating rates that only affect males (e.g., prostate and testes) or females (e.g., ovary and cervix).

Race-Specific Rates

Rates can also be calculated by race. Race-specific rates are used for comparison between different population groups of the race and to examine how the cancer burden varies between racial groups.

Both race and Hispanic ethnicity are collected by the CCR. Race information can be classified as one of the following: white, black, Asian/Pacific Islander, American Indian and other. Although the CCR has five race fields to account for people who are multi-racial, only the primary race is used. Often the CCR reports rates for whites and minorities. Minorities are defined to be blacks, Asian/Pacific Islanders, American Indians and others. To assist in identifying Hispanic ethnicity, the CCR uses the NAACCR Hispanic Identification Algorithm (NHIA). This algorithm uses name, birthplace, gender and race to determine Hispanic ethnicity.[9] Thus, the CCR can report rates on white non-Hispanics, black non-Hispanics, other races non-Hispanics and Hispanics.

Reliability of Rates

Precautions should always be taken when comparing rates. Rates are not a measure of actual risk. They are used to compare cancer burden between time periods, age groups, gender groups and racial groups. Both the size of the numbers and the characteristics of the population are important indicators of the real value of the rate. Rates based on a small number of cases or for sparsely populated geographic areas should be viewed with caution. Small fluctuations can lead to drastic changes. Therefore, sometimes it is more appropriate to look at the number of cases instead of the rates. When the number of events is small, multiple-year summary rates will provide a much better

measurement of risk. Expanding the period of time studied enlarges the absolute numbers and adds more credence to a statement regarding a rate.[10]

Limitations of Data

When comparing rates between two populations, the user should note that age structure is the only difference between the populations for which rates have been adjusted. Since county demographics can vary considerably, one needs to be careful not to misinterpret rates. Racial composition, for example, can have a marked influence on the patterns of cancer incidence and mortality. Under-reporting, due to out-of-state cases or poor case-finding in some non-hospital situations, also needs to be taken into account when making comparisons of cancer data.

Summary of 2016 Cancer Data

The CCR collected approximately 57,323 cases of newly diagnosed cancers and 19,526 deaths due to cancer in 2016 (Table 1). Female breast, prostate, lung and bronchus, and colon and rectum cancers were the leading diagnosed cancers among all gender and races combined. The CCR often refers to these as the top four cancers (Table 2).

Cancer risk is strongly associated with lifestyle and behavior. Dietary patterns, alcohol use, and sexual and reproductive behaviors, which vary by demographic groups, are risk factors of cancer. Cancer is diagnosed more often among older North Carolinians than younger ones. Males have higher cancer incidence and mortality rates than females. Overall, non-Hispanic blacks, non-Hispanic whites and non-Hispanic other races had higher incidence than Hispanics while non-Hispanic blacks and non-Hispanic whites had higher mortality rates when compared with non-Hispanic other races and Hispanics. Lung and bronchus cancer was the most common cause of death due to cancer.

Age

More adults are directly affected by cancer than children. Senior adults (ages 65 and older) made up about 15 percent of the population in 2016,[11] but accounted for over 55 percent of newly diagnosed cancer cases and two-thirds of deaths due to cancer. Children (ages 0 to 19) were the third largest age group but made up less than 1 percent of both newly diagnosed cancers and deaths due to cancer (Chart 1). In 2016, the median age at which cancer was diagnosed was 66, but people ranged in age from 2 to 106. People who died of cancer ranged in age from 1 to 106 with the median age being 72. The median age of incidence and mortality for each age group as well as the percentage of cases and deaths the top four cancers comprise are shown below. In both middle-aged and senior adults, the top four cancers combined accounted for more than half of the cancer cases and almost half of cancer deaths (Chart 2).

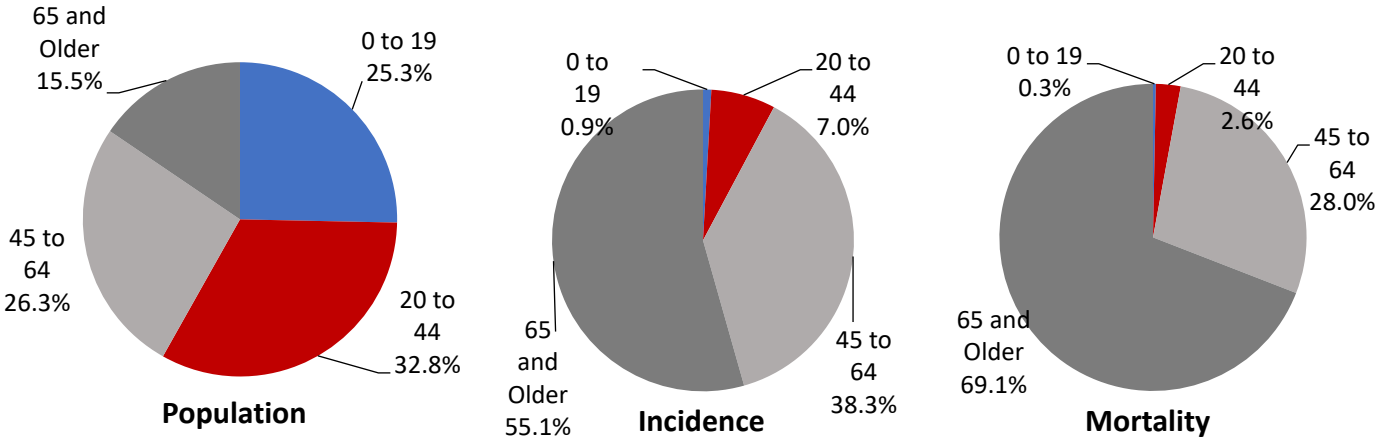
Children had a very different pattern of cancer than adults. Leukemia, Hodgkin Disease, Soft Tissue, Brain and Endocrine cancers accounted for 52 percent of cancers diagnosed in people under age 20. Leukemia, Bone, Soft Tissue, Brain and Endocrine cancers made up about 78 percent of pediatric cancer deaths (Tables 5 and 6).

Young adults (ages 20 to 44) had a different pattern of cancer than children. In this age group, there was a greater incidence of female breast, endocrine, melanoma (skin) and colon and rectum cancers than in the pediatric age group. On the other hand, the proportion of bone cancer was lower. Female breast cancer accounted for over 16 percent of all cancer deaths and had the highest

mortality rate within this age group. The mortality rate for female breast cancer was more than doubled the next highest cancer rate, colon and rectum (Tables 5 and 6).

Cancer patterns were different in middle-aged adults (ages 45 to 64) compared with young adults. In this age group, there was a higher frequency of female breast. The frequency of lung and bronchus cancer deaths was higher for middle-aged adults than young adults (Tables 5 and 6).

Chart 1: 2016 Percentages of N.C. Population, Cancer Incidence and Mortality by Age



In senior adults, cancer patterns were similar to middle-aged adults. The incidence of bone and hodgkin disease were lower. Lung and bronchus cancer accounted for more deaths than colon and rectum, female breast and prostate cancers combined (Tables 5 and 6).

Chart 2: 2016 Median Age and Percentage of Top Four Sites for Cancer Incidence and Mortality by Age Group

	Incidence		Mortality	
	Median Age	Top 4 Sites	Median Age	Top 4 Sites
Children (ages 0-19)	10	3.1%	13	4.1%
Young Adults (ages 20 to 44)	38	34.9%	39	37.6%
Middle-Aged Adults (ages 45 to 64)	57	54.3%	58	48.5%
Senior Adults (ages 65 and older)	73	52.6%	76	48.6%

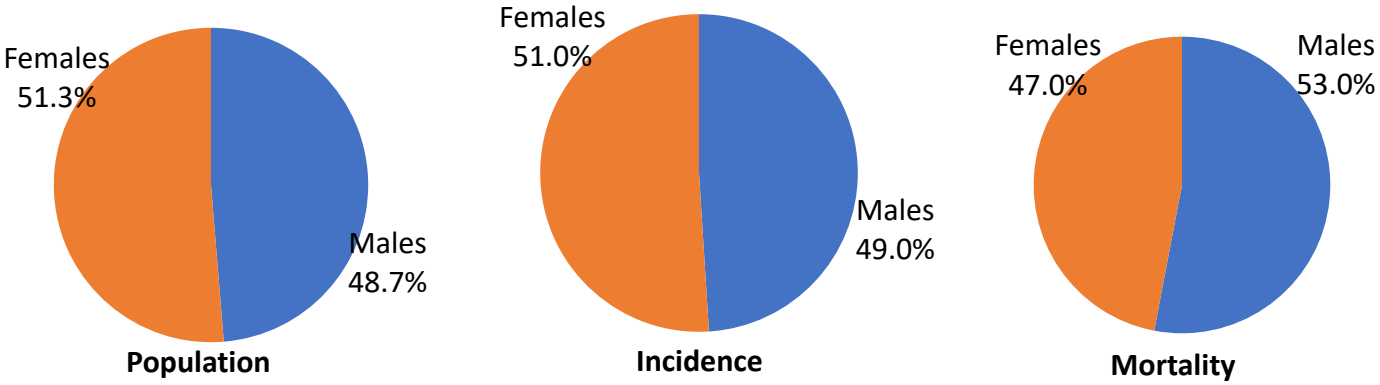
Gender

In 2016, more than 50 percent of the state population was female. While more than half of all cancer cases were diagnosed in females, more than half of deaths due to cancer were in males (Chart 3). The median age of diagnosis for females was slightly younger than males, but the median age of mortality for females was older than males. The top four sites comprised about half of both cancer incidence and mortality (Chart 4).

The most frequently occurring cancers among males were prostate, lung and bronchus, colon and rectum, melanoma and bladder. Lung and bronchus, prostate, colon and rectum, pancreatic and liver cancers were the leading causes of death due to cancer (Table 8).

Among females, the most frequently occurring cancers were breast, lung and bronchus, colon and rectum, uterine and melanoma. Lung and bronchus, breast, colon and rectum, pancreatic and ovarian were the leading causes of death due to cancer (Table 8).

Chart 3: 2016 Percentages of N.C. Population, Cancer Incidence and Mortality by Gender



Differences between genders could provide clues to factors involved in the development of cancer. Esophageal, laryngeal, urinary bladder, liver and oral cavity cancers had a higher frequency among males compared with females. However, females had a higher frequency of endocrine cancer compared with males. In males, about one third of deaths due to cancer came from lung and bronchus cancer, whereas in females, lung and bronchus cancer constituted about one quarter of cancer deaths (Table 7).

Chart 4: 2016 Median Age and Percentage of Top Four Sites for Cancer Incidence and Mortality by Gender

	Incidence		Mortality	
	Median Age	**Top 4 Sites**	**Median Age**	**Top 4 Sites**
Males	67	47.6%	71	47.2%
Females	65	55.3%	72	49.3%

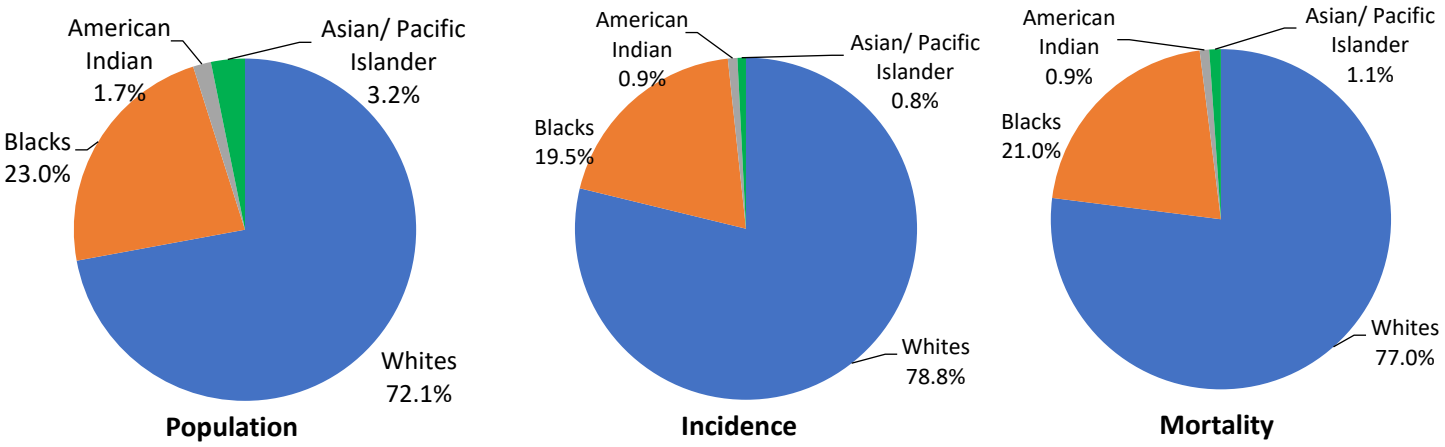
Race and Ethnicity

In 2016, about 72 percent of the North Carolina population was white. Blacks comprised more than one-fifth of the population. About 79 percent of cancer cases and 77 percent of cancer deaths occurred in whites while about 20 percent of cancer cases and 21 percent deaths occurred in blacks (Chart 5). The median age and the percentage the top four cancer sites comprise among all cancers for both incidence and mortality are displayed for all racial ethnic groups (Chart 6). Hispanics had the youngest median age of incidence as well as mortality. About 64 percent of cancer diagnosed in non-Hispanic blacks were from the top four sites.

For non-Hispanic whites, besides the top four cancers, melanoma was the next most frequently diagnosed cancer. Pancreatic cancer was the fifth leading cause of death in this group. The number of lung and bronchus cancer deaths was about 1.6 times as large as the number of deaths due to female breast, pancreatic, and colon and rectum cancers combined (Table 14).

Among non-Hispanic blacks, prostate cancer comprised approximately 16 percent of all diagnosed cancers. Pancreatic cancer was the fifth leading cause of death among non-Hispanic blacks. The number of lung and bronchus cancer deaths was higher than the number of deaths due to female breast and colon and rectum cancer combined (Table 14).

Chart 5: 2016 Percentages of N.C. Population, Cancer Incidence and Mortality by Race



For non-Hispanic other races, besides the top four cancers, melanoma was another commonly diagnosed cancer. The combined number of cancer deaths due to pancreatic and liver cancers were higher than those due to colorectal cancer in this group (Table 14).

For Hispanics, outside of the top four cancers, uterine cancer was another frequently diagnosed cancer. Lung and bronchus cancer constituted 21 percent of cancer deaths. For other racial and ethnic groups, lung and bronchus cancers made up about 30 percent of cancer deaths. In Hispanics, Liver cancer was the fifth leading cause of death due to cancer (Table 14).

Chart 6: 2016 Median Age and Percentage of Top Four Sites for Cancer Incidence and Mortality by Race and Ethnicity

	Incidence		Mortality	
	Median Age	Top 4 Sites	Median Age	Top 4 Sites
Non-Hispanic Whites	67	50.3%	72	48.0%
Non-Hispanic Blacks	64	57.9%	68	49.0%
Non-Hispanic Other Races	63	50.0%	67	51.4%
Hispanics	56	41.1%	64	45.5%

Conclusion

This descriptive report is intended to serve as a reference on cancer incidence and mortality for healthcare planners, researchers and the general public. This publication should not be regarded as a definitive description of the cancer incidence in North Carolina. Although there are important limitations in the use of these data, the observed number of cases and the calculated rates within a

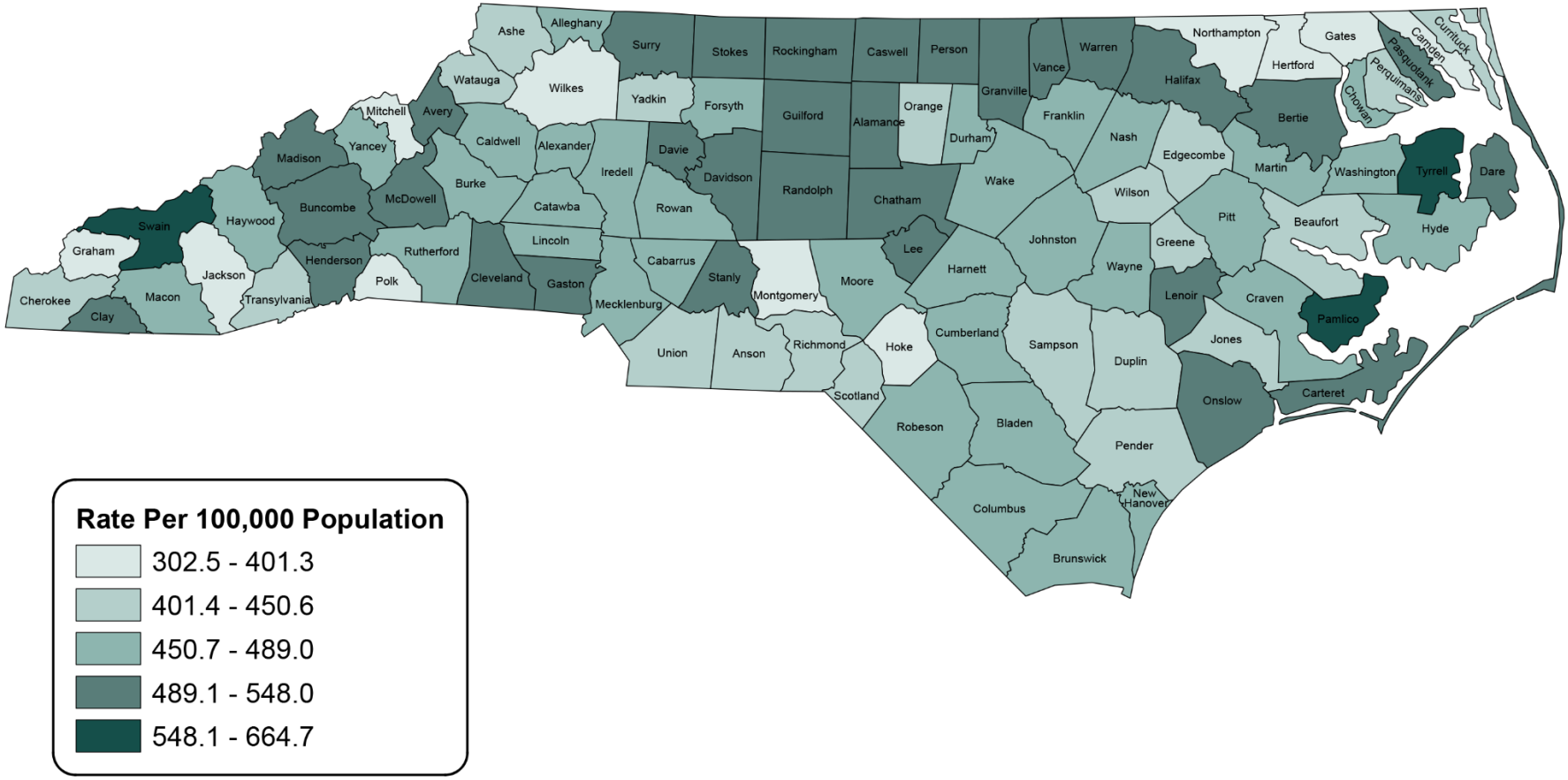
county, a gender group, a racial and ethnic group, or an age group have many uses. These uses include planning and evaluating health services at the county and state level and identifying cancer disparities between specific groups. The data provided by the CCR can be used by the Comprehensive Cancer Program in the Division of Public Health and other research organizations for prevention, detection and treatment of cancer.

The editor would like to thank Chandrika Rao, Christian Klaus, and other members of the CCR staff for their contributions to this report.

Available Cancer Information

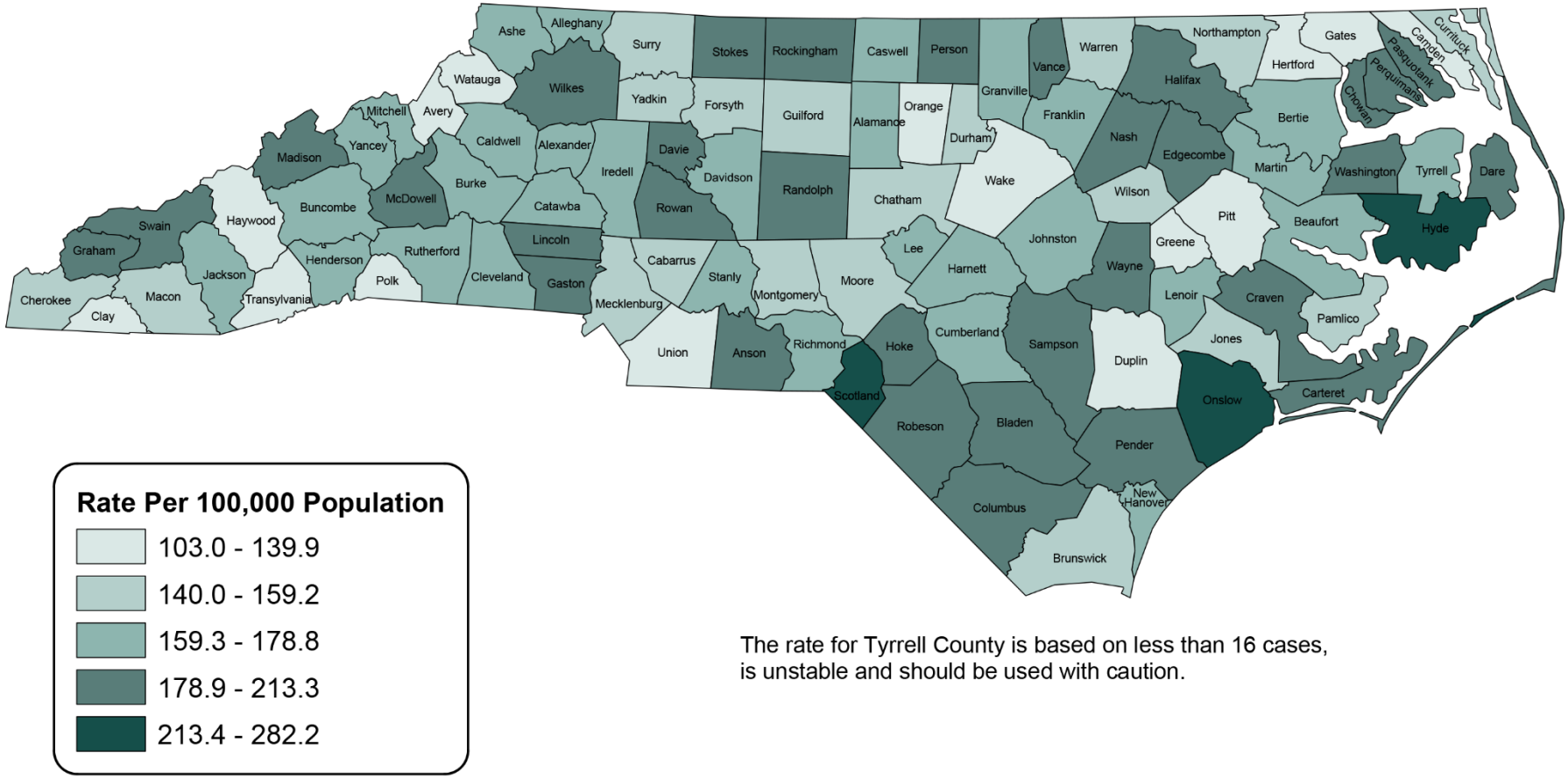
North Carolina Central Cancer Registry	
www.schs.state.nc.us/units/ccr/	919-792-5946
North Carolina State Center for Health Statistics	
www.schs.state.nc.us	919-733-4728
North Carolina Breast and Cervical Cancer Control Program	
http://bcccp.ncdhhs.gov	919-707-5300
North Carolina CCR Rapid Case Ascertainment	
http://unclineberger.org/research/core-facilities/rapid-case-ascertainment	919-966-0032 919-792-5925
American Cancer Society	
www.cancer.org	1-800-ACS-2345
National Cancer Institute	
www.cancer.gov	1-800-4-CANCER
Surveillance Epidemiology, and End Results	
http://seer.cancer.gov	
Cancer Control P.L.A.N.E.T.	
http://cancercontrolplanet.cancer.gov	
NCI State Cancer Profiles	
http://statecancerprofiles.cancer.gov	
National Program of Cancer Registries	
www.cdc.gov/cancer/NPCR	
North American Association of Central Cancer Registries	
www.naaccr.org	
Centers for Disease Control and Prevention	
www.cdc.gov	
CDC Wonder United States Cancer Statistics	
http://wonder.cdc.gov/cancer.html	
Association of North Carolina Cancer Registrars	
www.ncregistrars.com	
National Cancer Registrars Association	
www.ncra-usa.org	

Map 1: 2016 North Carolina Cancer Incidence Rates by County



Note: Rates are based on cases reported to the North Carolina Central Cancer Registry and are subject to change as files are updated.

Map 2: 2016 North Carolina Cancer Mortality Rates by County



Note: Rates are based on cases reported to the North Carolina Central Cancer Registry and are subject to change as files are updated.

Table 1: 2016 North Carolina Cancer Incidence and Mortality

	Incidence		Mortality	
	Cases	**Rate**	**Deaths**	**Rate**
All Cancers	57,323	474.5	19,526	161.9
Oral Cavity and Pharynx	1,537	12.4	342	2.8
Lip	39	0.3	2	0.0
Tongue	477	3.8	78	0.6
Salivary Glands	144	1.2	29	0.2
Floor of Mouth	78	0.6	7	0.1
Nasopharynx	46	0.4	27	0.2
Oropharynx	82	0.7	36	0.3
Hypopharynx	66	0.5	19	0.2
Other Mouth and Pharynx	605	4.8	144	1.2
Digestive System	9,225	76.0	4,813	39.4
Esophagus	487	3.9	407	3.3
Stomach	802	6.7	352	3.0
Small Intestine	347	2.9	49	0.4
Colon and Rectum	4,270	35.8	1,567	13.1
Anus and Anal Canal	259	2.2	44	0.4
Liver and Intrahepatic Bile Duct	1,057	8.1	863	6.7
Gallbladder	117	1.0	76	0.6
Pancreas	1,563	12.7	1,331	10.9
Other Digestive Organs	323	2.7	124	1.0
Respiratory System	8,721	70.4	5,738	46.6
Larynx	474	3.7	130	1.0
Lung and Bronchus	8,094	65.3	5,573	45.3
Other Respiratory Organs	153	1.3	35	0.3
Bones and Joints	84	0.8	47	0.4
Soft Tissue including Heart	375	3.3	184	1.6
Malignant Melanoma of the Skin	3,042	26.2	266	2.3
Breast	10,562	88.6	1,331	11.2
Invasive Breast	8,648	72.6		
In Situ Breast	1,914	16.0		
Female Genital System	3,121	48.6	974	14.7
Cervix Uteri, Invasive	391	7.2	120	2.0
Uterus (Corpus, NOS)	1,709	25.4	331	4.8
Ovary	664	10.6	424	6.4
Other Female Genital Organs	357	5.5	99	1.5

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include in situ cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 1 (continued): 2016 North Carolina Cancer Incidence and Mortality

	Incidence		Mortality	
	Cases	**Rate**	**Deaths**	**Rate**
Male Genital System	7,020	119.5	959	20.6
Prostate	6,695	112.7	936	20.2
Testis	256	5.5	12	0.2
Penis	54	1.0	7	0.1
Other Male Genital Organs	15	0.3	4	0.1
Urinary System	4,484	37.0	946	7.9
Urinary Bladder	2,284	18.8	480	4.1
Kidney and Renal Pelvis	2,086	17.2	440	3.7
Ureter	65	0.5	12	0.1
Other Urinary Organs	49	0.4	14	0.1
Eye and Orbit	102	0.9	12	0.1
Brain and Other CNS	709	6.3	485	4.1
Endocrine System	1,358	12.7	101	0.9
Thyroid Gland	1,279	12.0	72	0.6
Other Endocrine and Thymus	79	0.7	29	0.3
Lymphomas	2,249	19.3	603	5.2
Hodgkin Disease	248	2.4	19	0.2
Non-Hodgkin Lymphoma	2,001	16.9	584	5.0
Multiple Myeloma	914	7.5	450	3.8
Leukemia	1,551	13.3	691	6.0
Acute Lymphocytic Leukemia	44	0.4	41	0.4
Chronic Lymphocytic Leukemia	642	5.3	139	1.2
Acute Myeloid Leukemia	495	4.3	307	2.6
Chronic Myeloid Leukemia	229	2.0	34	0.3
Other Leukemia	141	1.3	170	1.5
Other Cancers - Uncategorized	5,770	49.9	1,584	13.2

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include in situ cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 2: 2016 North Carolina Top Ten Cancer Incidence and Mortality Sites

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	10,470	163.9	Lung and Bronchus	5,573	45.3
Prostate	6,697	112.7	Prostate	936	20.2
Lung and Bronchus	8,094	65.3	Female Breast	1,319	20.1
Colon and Rectum	4,270	35.8	Colon and Rectum	1,579	13.2
Melanoma (Skin)	3,042	26.2	Pancreas	1,331	10.9
Corpus Uteri	1,709	25.4	Liver	863	6.7
Urinary Bladder	2,284	18.8	Ovary	424	6.4
Kidney	2,086	17.2	Leukemia	691	6.0
Non-Hodgkin Lymphoma	2,013	17.0	Non-Hodgkin Lymphoma	584	5.0
Leukemia	1,551	13.3	Corpus Uteri	331	4.8

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 3: 2016 Cancer Incidence and Mortality by County

	Incidence		Mortality	
	Cases	**Rate**	**Deaths**	**Rate**
North Carolina	57,323	474.5	19,526	161.9
Alamance	991	504.2	331	160.6
Alexander	248	488.9	88	170.5
Alleghany	95	456.4	34	169.1
Anson	143	429.7	61	182.7
Ashe	192	450.6	70	164.8
Avery	125	493.9	29	107.8
Beaufort	305	424.0	126	167.2
Bertie	148	509.9	54	168.5
Bladen	224	456.8	91	185.0
Brunswick	1,065	479.0	343	153.9
Buncombe	1,761	512.0	591	167.7
Burke	571	454.0	224	173.2
Cabarrus	1,025	473.6	301	146.9
Caldwell	541	480.2	190	165.9
Camden	49	379.9	17	125.3
Carteret	536	494.3	222	202.1
Caswell	173	521.2	63	172.4
Catawba	946	465.0	332	164.7
Chatham	535	495.9	168	145.5
Cherokee	231	441.8	77	159.0
Chowan	106	464.3	46	202.9
Clay	93	492.8	28	137.2
Cleveland	666	524.8	222	178.8
Columbus	356	456.7	155	193.8
Craven	616	474.5	245	183.6
Cumberland	1,445	460.7	546	178.5
Currituck	141	419.4	54	155.0
Dare	270	501.4	105	196.8
Davidson	1,051	493.8	364	168.3
Davie	303	498.3	113	180.9
Duplin	322	424.8	109	139.9
Durham	1,414	456.4	457	154.5
Edgecombe	312	426.6	140	189.5
Forsyth	2,134	486.6	682	156.3

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 3 (continued): 2016 Cancer Incidence and Mortality by County

	Incidence		Mortality	
	Cases	**Rate**	**Deaths**	**Rate**
Franklin	398	477.6	145	178.4
Gaston	1,320	503.5	472	180.7
Gates	60	373.8	21	130.7
Graham	42	302.5	28	199.0
Granville	387	512.7	129	173.5
Greene	108	404.5	34	135.0
Guilford	2,985	501.9	918	153.9
Halifax	357	490.2	152	199.3
Harnett	620	484.8	221	175.7
Haywood	445	484.0	141	137.8
Henderson	901	495.6	325	165.6
Hertford	119	346.8	46	131.0
Hoke	184	393.1	77	196.6
Hyde	37	476.6	22	282.2
Iredell	991	477.9	337	170.6
Jackson	208	393.1	90	163.7
Johnston	960	459.6	329	162.1
Jones	63	414.2	23	142.4
Lee	382	519.7	121	164.0
Lenoir	403	513.7	132	164.5
Lincoln	509	479.2	196	185.8
McDowell	321	499.7	121	185.8
Macon	268	452.5	94	147.0
Madison	166	525.6	59	182.0
Martin	169	463.3	62	176.2
Mecklenburg	4,598	457.6	1,340	142.9
Mitchell	100	401.3	44	169.1
Montgomery	151	389.3	62	150.9
Moore	709	483.1	250	151.9
Nash	590	467.5	230	183.9
New Hanover	1,243	456.0	447	160.4
Northampton	126	388.1	54	155.5
Onslow	756	537.5	314	236.3
Orange	654	446.8	194	134.7
Pamlico	126	592.5	37	152.5

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 3 (continued): 2016 Cancer Incidence and Mortality by County

	Incidence		Mortality	
	Cases	**Rate**	**Deaths**	**Rate**
Pasquotank	266	548.0	99	204.1
Pender	345	445.8	141	183.4
Perquimans	103	444.0	42	186.6
Person	276	507.9	103	190.2
Pitt	814	465.6	241	138.1
Polk	145	362.4	48	113.4
Randolph	981	535.9	338	183.7
Richmond	262	440.5	105	176.8
Robeson	682	459.7	296	193.6
Rockingham	704	540.9	245	181.7
Rowan	886	488.1	325	182.6
Rutherford	448	474.7	169	169.2
Sampson	351	436.5	166	200.4
Scotland	193	426.6	108	236.7
Stanly	428	547.7	143	172.7
Stokes	326	496.6	125	184.1
Surry	531	522.1	172	159.2
Swain	126	658.4	37	184.2
Transylvania	282	446.0	88	133.5
Tyrrell	35	664.7	10	161.2
Union	1,056	448.8	303	138.4
Vance	277	494.9	128	213.3
Wake	4,697	464.6	1,253	135.3
Warren	155	501.9	51	144.9
Washington	91	479.2	38	192.3
Watauga	246	425.5	62	103.0
Wayne	724	489.0	280	183.9
Wilkes	398	395.9	181	181.2
Wilson	444	424.5	153	142.7
Yadkin	228	442.0	83	152.5
Yancey	123	453.0	48	164.5

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 4: 2016 Ten Highest and Lowest Cancer Incidence and Mortality Rates by County

Incidence - Lowest Ten

	Cases	Rate
Graham	42	302.5
Hertford	119	346.8
Polk	145	362.4
Gates	60	373.8
Camden	49	379.9
Northampton	126	388.1
Montgomery	151	389.3
Jackson	208	393.1
Hoke	184	393.1
Wilkes	398	395.9

Mortality - Lowest Ten

	Deaths	Rate
Watauga	62	103.0
Avery	29	107.8
Polk	48	113.4
Camden	17	125.3
Gates	21	130.7
Hertford	46	131.0
Transylvania	88	133.5
Orange	194	134.7
Greene	34	135.0
Wake	1,253	135.3

Incidence - Highest Ten

	Cases	Rate
Tyrrell	35	664.7
Swain	126	658.4
Pamlico	126	592.5
Pasquotank	266	548.0
Stanly	428	547.7
Rockingham	704	540.9
Onslow	756	537.5
Randolph	981	535.9
Madison	166	525.6
Cleveland	666	524.8

Mortality - Highest Ten

	Deaths	Rate
Hyde	22	282.2
Scotland	108	236.7
Onslow	314	236.3
Vance	128	213.3
Pasquotank	99	204.1
Chowan	46	202.9
Carteret	222	202.1
Sampson	166	200.4
Halifax	152	199.3
Graham	28	199.0

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 5: 2016 Cancer Incidence and Mortality by Age Group

	Incidence				Mortality			
	0-19		20-44		0-19		20-44	
	Cases	Rate	Cases	Rate	Deaths	Rate	Deaths	Rate
All Cancers	518	20.2	4,006	120.1	49	1.9	505	15.1
Oral Cavity	*	*	89	2.7	0	0.0	7	0.2
Esophagus	0	0.0	7	0.2	0	0.0	5	0.1
Stomach	0	0.0	53	1.6	0	0.0	17	0.5
Colon and Rectum	11	0.4	300	9.0	1	0.0	62	1.9
Liver	8	0.3	19	0.6	0	0.0	12	0.4
Gallbladder	0	0.0	*	*	0	0.0	1	0.0
Pancreas	*	*	52	1.6	0	0.0	17	0.5
Larynx	0	0.0	13	0.4	0	0.0	1	0.0
Lung and Bronchus	*	*	107	3.2	0	0.0	45	1.3
Bone	24	0.9	14	0.4	3	0.1	12	0.4
Soft Tissue	27	1.1	62	1.9	7	0.3	20	0.6
Melanoma (Skin)	13	0.5	369	11.1	0	0.0	17	0.5
Female Breast	*	*	958	57.2	0	0.0	82	4.9
Cervix Uteri	0	0.0	152	9.1	0	0.0	24	1.4
Corpus Uteri	0	0.0	114	6.8	0	0.0	6	0.4
Ovary	8	0.6	71	4.2	0	0.0	13	0.8
Prostate	0	0.0	35	2.1	1	0.1	1	0.1
Testes	14	1.1	200	12.0	0	0.0	5	0.3
Urinary Bladder	*	*	34	1.0	0	0.0	2	0.1
Kidney	20	0.8	140	4.2	0	0.0	12	0.4
Endocrine	40	1.6	452	13.5	4	0.2	5	0.1
Multiple Myeloma	0	0.0	35	1.0	0	0.0	6	0.2
Leukemia	63	2.5	120	3.6	11	0.4	34	1.0
Brain and Other CNS	111	4.3	92	2.8	13	0.5	37	1.1
Hodgkin Disease	30	1.2	120	3.6	0	0.0	2	0.1
Non-Hodgkin Lymphoma	25	1.0	160	4.8	3	0.1	18	0.5
Other Cancers	111	4.3	236	7.1	6	0.2	42	1.3

Rates are per 100,000 persons.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

* Incidence counts less than five are suppressed.

Rates based on counts less than 16 are unstable and should be used with caution.

2014Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 5 (continued): 2016 Cancer Incidence and Mortality by Age Group

	Incidence				Mortality			
	45-64		65 and above		45-64		65 and above	
	Cases	**Rate**	**Cases**	**Rate**	**Deaths**	**Rate**	**Deaths**	**Rate**
All Cancers	21,226	791.0	31,574	2010.3	5,476	204.1	13,496	859.3
Oral Cavity	710	26.5	734	46.7	137	5.1	198	12.6
Esophagus	185	6.9	295	18.8	157	5.9	245	15.6
Stomach	279	10.4	470	29.9	98	3.7	237	15.1
Colon and Rectum	1,673	62.3	2,286	145.6	512	19.1	1,004	63.9
Liver	506	18.9	524	33.4	382	14.2	469	29.9
Gallbladder	38	1.4	77	4.9	21	0.8	54	3.4
Pancreas	477	17.8	1,031	65.6	361	13.5	953	60.7
Larynx	219	8.2	242	15.4	50	1.9	79	5.0
Lung and Bronchus	2,484	92.6	5,499	350.1	1,571	58.5	3,957	251.9
Bone	22	0.8	24	1.5	12	0.4	20	1.3
Soft Tissue	118	4.4	168	10.7	50	1.9	107	6.8
Melanoma (Skin)	1,080	40.2	1,580	100.6	72	2.7	177	11.3
Female Breast	4,689	336.5	4,822	544.6	471	33.8	766	86.5
Cervix Uteri	161	11.6	78	8.8	52	3.7	44	5.0
Uterus (Corpus, NOS)	810	58.1	785	88.7	105	7.5	220	24.8
Ovary	286	20.5	299	33.8	106	7.6	305	34.4
Prostate	2,672	207.2	3,991	582.5	104	8.1	830	121.1
Testes	41	3.2	*	*	4	0.3	3	0.4
Urinary Bladder	571	21.3	1,678	106.8	81	3.0	397	25.3
Kidney	869	32.4	1,057	67.3	134	5.0	294	18.7
Endocrine	549	20.5	317	20.2	34	1.3	58	3.7
Multiple Myeloma	286	10.7	593	37.8	85	3.2	359	22.9
Leukemia	419	15.6	949	60.4	100	3.7	546	34.8
Brain and Other CNS	219	8.2	287	18.3	175	6.5	260	16.6
Hodgkin Disease	46	1.7	52	3.3	2	0.1	15	1.0
Non-Hodgkin Lymphoma	641	23.9	1,187	75.6	106	4.0	457	29.1
Other Cancers	1,176	43.8	2,546	162.1	494	18.4	1,442	91.8

Rates are per 100,000 persons.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system excludes benign cases.

* Incidence counts less than five are suppressed.

Rates based on counts less than 16 are unstable and should be used with caution.

2014Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 6: 2016 Top Ten Cancer Incidence and Mortality by Age Group

Ages 0 to 19

Incidence	Cases	Rate	Mortality	Deaths	Rate
Brain and Other CNS	111	4.3	Brain and Other CNS	13	0.5
Leukemia	63	2.5	Leukemia	11	0.4
Endocrine	40	1.6	Soft Tissue	7	0.3
Hodgkin Disease	30	1.2	Endocrine	4	0.2
Soft Tissue	27	1.1	Bone	3	0.1
Testes	14	1.1	Non-Hodgkin Lymphoma	3	0.1
Non-Hodgkin Lymphoma	25	1.0	Prostate	1	0.1
Bone	24	0.9	Colon and Rectum	1	0.0
Kidney	20	0.8			
Ovary	8	0.6			

Ages 20 to 44

Incidence	Cases	Rate	Mortality	Deaths	Rate
Female Breast	958	57.2	Female Breast	82	4.9
Endocrine	452	13.5	Colon and Rectum	62	1.9
Testes	200	12.0	Cervix Uteri	24	1.4
Melanoma (Skin)	369	11.1	Lung and Bronchus	45	1.3
Cervix Uteri	152	9.1	Brain and Other CNS	37	1.1
Colon and Rectum	300	9.0	Leukemia	34	1.0
Corpus Uteri	114	6.8	Ovary	13	0.8
Non-Hodgkin Lymphoma	160	4.8	Soft Tissue	20	0.6
Kidney	140	4.2	Non-Hodgkin Lymphoma	18	0.5
Ovary	71	4.2	Melanoma (Skin)	17	0.5

Rates are per 100,000 persons.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

2014Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 6 (continued): 2016 Top Ten Cancer Incidence and Mortality by Age Group

Ages 45 to 64

Incidence			Mortality		
	Cases	Rate		Deaths	Rate
Female Breast	4,689	336.5	Lung and Bronchus	1,571	58.5
Prostate	2,672	207.2	Female Breast	471	33.8
Lung and Bronchus	2,484	92.6	Colon and Rectum	512	19.1
Colon and Rectum	1,673	62.3	Liver	382	14.2
Corpus Uteri	810	58.1	Pancreas	361	13.5
Melanoma (Skin)	1,080	40.2	Prostate	104	8.1
Kidney	869	32.4	Ovary	106	7.6
Oral Cavity	710	26.5	Corpus Uteri	105	7.5
Non-Hodgkin Lymphoma	641	23.9	Brain and Other CNS	175	6.5
Urinary Bladder	571	21.3	Esophagus	157	5.9

Ages 65 and above

Incidence			Mortality		
	Cases	Rate		Deaths	Rate
Prostate	3,991	582.5	Lung and Bronchus	3,957	251.9
Female Breast	4,822	544.6	Prostate	830	121.1
Lung and Bronchus	5,499	350.1	Female Breast	766	86.5
Colon and Rectum	2,286	145.6	Colon and Rectum	1,004	63.9
Urinary Bladder	1,678	106.8	Pancreas	953	60.7
Melanoma (Skin)	1,580	100.6	Leukemia	546	34.8
Corpus Uteri	785	88.7	Ovary	305	34.4
Non-Hodgkin Lymphoma	1,187	75.6	Liver	469	29.9
Kidney	1,057	67.3	Non-Hodgkin Lymphoma	457	29.1
Pancreas	1,031	65.6	Urinary Bladder	397	25.3

Rates are per 100,000 persons.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

2014Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 7: 2016 Cancer Incidence and Mortality by Gender

	Incidence				Mortality			
	Males		Females		Males		Females	
	Cases	Rate	Cases	Rate	Deaths	Rate	Deaths	Rate
All Cancers	28,091	508.5	29,217	455.1	10,352	197.7	9,174	136.6
Oral Cavity and Pharynx	1,098	19.1	439	6.8	244	4.5	98	1.5
Lip	27	0.5	12	0.2	1	0.0	1	0.0
Tongue	354	6.0	123	1.9	58	1.1	20	0.3
Salivary Glands	81	1.6	63	1.0	21	0.4	8	0.1
Floor of Mouth	56	1.0	22	0.4	4	0.1	3	0.0
Nasopharynx	34	0.6	12	0.2	15	0.2	12	0.2
Oropharynx	64	1.1	18	0.3	28	0.5	8	0.1
Hypopharynx	51	0.9	15	0.2	13	0.2	6	0.1
Other Mouth and Pharynx	431	7.4	174	2.6	104	1.9	40	0.6
Digestive System	5,136	92.7	4,086	62.3	2,779	51.0	2,034	30.1
Esophagus	375	6.6	111	1.6	322	5.8	85	1.3
Stomach	501	9.2	301	4.6	226	4.3	126	1.9
Small Intestine	185	3.3	162	2.5	29	0.5	20	0.3
Colon and Rectum	2,264	41.5	2,005	31.1	832	15.7	735	11.0
Anus and Anal Canal	89	1.6	170	2.6	20	0.3	24	0.4
Liver and Intrahepatic Bile Duct	753	12.5	303	4.4	583	10.0	280	4.1
Gallbladder	37	0.7	80	1.2	18	0.3	58	0.9
Pancreas	799	14.6	764	11.3	693	13.0	638	9.4
Other Digestive Organs	133	2.6	190	2.8	56	1.2	68	1.0
Respiratory System	4,883	88.7	3,837	56.4	3,232	60.0	2,506	36.6
Larynx	371	6.4	103	1.5	100	1.7	30	0.4
Lung and Bronchus	4,410	80.3	3,683	54.0	3,109	57.8	2,464	36.0
Other Respiratory Organs	102	2.0	51	0.8	23	0.5	12	0.2
Bones and Joints	48	0.9	36	0.7	27	0.5	20	0.4
Soft Tissue including Heart	208	4.0	167	2.8	92	1.8	92	1.5
Malignant Melanoma of the Skin	1,821	34.5	1,221	20.2	168	3.3	98	1.5
Breast	87	1.6	10,470	163.9	12	0.2	1,319	20.1
Invasive Breast	75	1.4	8,569	133.9				
In Situ Breast	12	0.2	1,901	29.9				
Female Genital System	.	.	3,121	48.6	.	.	974	14.7
Cervix Uteri, Invasive	.	.	391	7.2	.	.	120	2.0
Uterus (Corpus, NOS)	.	.	1,709	25.4	.	.	331	4.8
Ovary	.	.	664	10.6	.	.	424	6.4
Other Female Genital Organs	.	.	357	5.5	.	.	99	1.5

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2015.
Rates based on counts less than 16 are unstable and should be used with caution. Rates are calculated using the bridged-race population estimates obtained from the National online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 7 (continued): 2016 Cancer Incidence and Mortality by Gender

	Males		Females		Males		Females	
	Cases	**Rate**	**Cases**	**Rate**	**Deaths**	**Rate**	**Deaths**	**Rate**
Male Genital System	7,020	119.5	.	.	959	20.6	.	.
Prostate	6,695	112.7	.	.	936	20.2	.	.
Testis	256	5.5	.	.	12	0.2	.	.
Penis	54	1.0	.	.	7	0.1	.	.
Other Male Genital Organs	15	0.3	.	.	4	0.1	.	.
Urinary System	3,110	58.0	1,372	20.7	619	12.3	327	4.8
Urinary Bladder	1,727	33.2	556	8.1	326	6.8	154	2.2
Kidney and Renal Pelvis	1,302	23.2	783	12.2	277	5.2	163	2.4
Ureter	47	0.9	18	0.3	8	0.2	4	0.1
Other Urinary Organs	34	0.7	15	0.2	8	0.1	6	0.1
Eye and Orbit	47	0.9	55	0.9	5	0.1	7	0.1
Brain and Other CNS	391	7.4	318	5.3	275	5.1	210	3.2
Endocrine System	387	7.4	971	17.9	55	1.0	46	0.7
Thyroid Gland	344	6.5	935	17.2	40	0.7	32	0.5
Other Endocrine and Thymus	43	0.8	36	0.7	15	0.3	14	0.2
Lymphomas	1,237	23.5	1,012	16.0	356	7.1	247	3.7
Hodgkin Disease	144	2.9	104	2.0	12	0.3	7	0.1
Non-Hodgkin Lymphoma	1,093	20.6	908	14.0	344	6.8	240	3.6
Multiple Myeloma	487	8.9	427	6.4	245	4.9	205	3.1
Leukemia	904	17.3	647	10.1	384	7.8	307	4.6
Acute Lymphocytic Leukemia	37	0.7	7	0.1	19	0.4	22	0.4
Chronic Lymphocytic Leukemia	391	7.3	251	3.7	79	1.7	60	0.8
Acute Myeloid Leukemia	272	5.2	223	3.6	177	3.5	130	2.0
Chronic Myeloid Leukemia	126	2.5	103	1.6	15	0.3	19	0.3
Other Leukemia	78	1.5	63	1.0	94	1.9	76	1.2
Other Cancers - Uncategorized	3,304	63.6	2,462	39.8	900	17.5	684	10.0

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancers exclude benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 8: 2016 Top Ten Cancer Incidence and Mortality Sites by Gender

Males

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	6,695	112.7	Lung and Bronchus	3,109	57.8
Lung and Bronchus	4,410	80.3	Prostate	936	20.2
Colon and Rectum	2,264	41.5	Colon and Rectum	839	15.8
Melanoma (Skin)	1,821	34.5	Pancreas	693	13.0
Urinary Bladder	1,727	33.2	Liver	583	10.0
Kidney	1,302	23.2	Leukemia	384	7.8
Non-Hodgkin Lymphoma	1,103	20.8	Urinary Bladder	326	6.8
Oral Cavity	1,098	19.1	Non-Hodgkin Lymphoma	344	6.8
Leukemia	904	17.3	Esophagus	322	5.8
Pancreas	799	14.6	Kidney	277	5.2

Females

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	10,470	163.9	Lung and Bronchus	2,464	36.0
Lung and Bronchus	3,683	54.0	Female Breast	1,319	20.1
Colon and Rectum	2,005	31.1	Colon and Rectum	740	11.0
Corpus Uteri	1,709	25.4	Pancreas	638	9.4
Melanoma (Skin)	1,221	20.2	Ovary	424	6.4
Endocrine	971	17.9	Corpus Uteri	331	4.8
Non-Hodgkin Lymphoma	910	14.0	Leukemia	307	4.6
Kidney	783	12.2	Liver	280	4.1
Pancreas	764	11.3	Non-Hodgkin Lymphoma	240	3.6
Ovary	664	10.6	Brain and Other CNS	210	3.2

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancers exclude benign cases.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 9: 2016 Cancer Incidence and Mortality by Race

	Incidence				Mortality			
	Whites		Minorities		Whites		Minorities	
	Cases	**Rate**	**Cases**	**Rate**	**Deaths**	**Rate**	**Deaths**	**Rate**
All Cancers	44,062	470.3	12,504	458.2	14,886	155.9	4,455	174.5
Oral Cavity and Pharynx	1,247	13.0	282	9.8	251	2.6	89	3.3
Lip	36	0.4	*	*	2	0.0	0	0.0
Tongue	410	4.2	66	2.3	63	0.6	13	0.5
Salivary Glands	113	1.2	30	1.0	22	0.2	7	0.2
Floor of Mouth	60	0.6	18	0.6	5	0.0	2	0.1
Nasopharynx	30	0.3	16	0.5	14	0.1	13	0.5
Oropharynx	59	0.6	23	0.8	31	0.3	5	0.2
Hypopharynx	48	0.5	18	0.6	13	0.1	6	0.3
Other Mouth and Pharynx	491	5.1	109	3.8	101	1.0	43	1.6
Digestive System	6,829	72.2	2,367	88.1	3,495	36.3	1,252	48.3
Esophagus	391	4.0	96	3.5	341	3.5	65	2.5
Stomach	509	5.4	290	11.1	205	2.2	135	5.6
Small Intestine	251	2.7	94	3.5	35	0.4	14	0.5
Colon and Rectum	3,195	34.6	1,057	39.8	1,137	12.1	407	16.0
Anus and Anal Canal	205	2.2	53	2.0	33	0.3	11	0.4
Liver and Intrahepatic Bile Duct	767	7.6	287	9.7	599	6.1	248	8.5
Gallbladder	81	0.9	36	1.4	42	0.4	32	1.3
Pancreas	1,181	12.2	380	14.5	1,002	10.3	317	12.7
Other Digestive Organs	249	2.7	74	2.8	101	1.1	23	0.9
Respiratory System	6,963	71.3	1,747	65.6	4,544	46.7	1,163	44.5
Larynx	361	3.7	113	3.9	79	0.8	51	1.8
Lung and Bronchus	6,472	66.1	1,611	60.7	4,435	45.5	1,107	42.5
Other Respiratory Organs	130	1.4	23	0.9	30	0.3	5	0.2
Bones and Joints	68	0.9	14	0.5	38	0.5	8	0.3
Soft Tissue including Heart	280	3.2	91	3.3	127	1.4	52	2.0
Malignant Melanoma of the Skin	2,772	31.0	32	1.3	259	2.8	6	0.3
Breast	8,024	87.3	2,501	91.0	937	10.0	378	14.4
Invasive Breast	6,600	71.6	2,018	74.0				
In Situ Breast	1,424	15.7	483	17.0				
Female Genital System	2,384	49.3	728	46.5	711	13.9	254	16.9
Cervix Uteri, Invasive	269	7.1	120	8.0	77	1.8	41	2.8
Uterus (Corpus, NOS)	1,294	25.4	410	25.6	209	3.9	120	7.9
Ovary	522	10.9	140	9.1	353	6.8	68	4.5
Other Female Genital Organs	299	6.0	58	3.8	72	1.4	25	1.8

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2015.
Rates based on counts less than 16 are unstable and should be used with caution. Rates are calculated using the bridged-race population estimates obtained from the National online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 9 (continued): 2016 Cancer Incidence and Mortality by Race

	Incidence				Mortality			
	Whites		Minorities		Whites		Minorities	
	Cases	Rate	Cases	Rate	Deaths	Rate	Deaths	Rate
Male Genital System	4,750	102.4	1,995	163.8	647	17.0	306	38.4
Prostate	4,468	94.4	1,952	160.4	633	16.6	299	37.8
Testis	223	6.7	33	2.5	8	0.2	2	0.2
Penis	47	1.1	7	0.6	4	0.1	3	0.3
Other Male Genital Organs	12	0.3	*	*	2	0.1	2	0.1
Urinary System	3,667	38.5	795	29.9	771	8.1	170	7.0
Urinary Bladder	1,990	20.6	283	11.3	401	4.2	77	3.3
Kidney and Renal Pelvis	1,580	16.9	495	17.9	348	3.7	89	3.6
Ureter	55	0.6	10	0.5	9	0.1	3	0.1
Other Urinary Organs	42	0.4	7	0.2	13	0.1	1	0.0
Eye and Orbit	90	1.0	10	0.3	11	0.1	1	0.0
Brain and Other CNS	569	6.7	134	4.9	410	4.4	68	2.5
Endocrine System	1,049	13.4	308	11.0	71	0.8	28	1.1
Thyroid Gland	995	12.7	283	10.1	54	0.6	17	0.7
Other Endocrine and Thymus	54	0.7	25	0.9	17	0.2	11	0.4
Lymphomas	1,796	19.8	447	16.3	503	5.4	92	3.6
Hodgkin Disease	181	2.4	66	2.3	16	0.2	2	0.1
Non-Hodgkin Lymphoma	1,615	17.4	381	14.0	487	5.2	90	3.6
Multiple Myeloma	563	5.8	345	13.2	296	3.1	149	6.4
Leukemia	1,220	13.4	267	10.3	572	6.2	111	4.5
Acute Lymphocytic Leukemia	29	0.4	15	0.5	32	0.4	5	0.2
Chronic Lymphocytic Leukemia	514	5.4	89	3.6	115	1.2	24	1.1
Acute Myeloid Leukemia	395	4.4	98	3.7	260	2.8	45	1.8
Chronic Myeloid Leukemia	168	1.9	41	1.6	20	0.2	13	0.5
Other Leukemia	114	1.3	24	1.0	145	1.6	24	1.0
Other Cancers - Uncategorized	4,911	54.7	578	22.3	1,243	13.1	328	12.5

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancers exclude benign cases.

Rates based on counts less than 16 are unstable and should be used with caution.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 10: 2016 Top Ten Cancer Incidence and Mortality Sites by Race

Whites

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	7,955	164.3	Lung and Bronchus	4,435	45.5
Prostate	4,469	94.4	Female Breast	927	18.1
Lung and Bronchus	6,472	66.1	Prostate	633	16.6
Colon and Rectum	3,195	34.6	Colon and Rectum	1,148	12.2
Melanoma (Skin)	2,772	31.0	Pancreas	1,002	10.3
Corpus Uteri	1,294	25.4	Ovary	353	6.8
Urinary Bladder	1,990	20.6	Leukemia	572	6.2
Non-Hodgkin Lymphoma	1,624	17.5	Liver	599	6.1
Kidney	1,580	16.9	Non-Hodgkin Lymphoma	487	5.2
Endocrine	1,049	13.4	Brain and Other CNS	410	4.4

Minorities

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	1,953	160.4	Lung and Bronchus	1,107	42.5
Female Breast	2,479	159.6	Prostate	299	37.8
Lung and Bronchus	1,611	60.7	Female Breast	376	24.5
Colon and Rectum	1,057	39.8	Colon and Rectum	408	16.0
Corpus Uteri	410	25.6	Pancreas	317	12.7
Kidney	495	17.9	Liver	248	8.5
Pancreas	380	14.5	Corpus Uteri	120	7.9
Non-Hodgkin Lymphoma	384	14.1	Multiple Myeloma	149	6.4
Multiple Myeloma	345	13.2	Stomach	135	5.6
Urinary Bladder	283	11.3	Ovary	68	4.5

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancers exclude benign cases.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 11: 2016 Top Ten Cancer Incidence and Mortality by Race and Gender

White Males

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	4,468	94.4	Lung and Bronchus	2,439	56.4
Lung and Bronchus	3,477	78.7	Prostate	633	16.6
Colon and Rectum	1,703	39.6	Colon and Rectum	609	14.4
Melanoma (Skin)	1,665	39.6	Pancreas	543	12.6
Urinary Bladder	1,536	36.4	Liver	405	8.9
Kidney	994	22.5	Leukemia	315	7.9
Non-Hodgkin Lymphoma	895	21.1	Urinary Bladder	283	7.2
Oral Cavity	891	19.7	Non-Hodgkin Lymphoma	282	6.9
Leukemia	717	17.4	Esophagus	275	6.1
Pancreas	616	14.1	Brain and Other CNS	231	5.4

White Females

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	7,955	164.3	Lung and Bronchus	1,996	37.2
Lung and Bronchus	2,994	56.5	Female Breast	927	18.1
Colon and Rectum	1,492	30.3	Colon and Rectum	539	10.4
Corpus Uteri	1,294	25.4	Pancreas	459	8.5
Melanoma (Skin)	1,107	24.6	Ovary	353	6.8
Endocrine	722	18.7	Leukemia	257	4.9
Non-Hodgkin Lymphoma	729	14.6	Non-Hodgkin Lymphoma	205	3.9
Kidney	585	11.9	Corpus Uteri	209	3.9
Ovary	522	10.9	Liver	194	3.6
Pancreas	565	10.7	Brain and Other CNS	179	3.5

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include in situ cases.

Brain and other central nervous system cancer excludes benign cases.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 11 (continued): 2016 Top Ten Cancer Incidence and Mortality by Race and Gender

Minority Males

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	1,952	160.4	Lung and Bronchus	652	61.0
Lung and Bronchus	930	85.2	Prostate	299	37.8
Colon and Rectum	549	48.7	Colon and Rectum	214	20.5
Kidney	298	24.9	Pancreas	143	13.8
Urinary Bladder	183	18.1	Liver	163	12.9
Non-Hodgkin Lymphoma	206	17.7	Multiple Myeloma	87	9.9
Pancreas	182	15.8	Stomach	86	8.7
Multiple Myeloma	169	15.7	Leukemia	65	7.0
Oral Cavity	202	15.6	Non-Hodgkin Lymphoma	57	5.4
Liver	203	15.5	Kidney	54	5.3

Minority Females

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	2,479	159.6	Lung and Bronchus	455	30.0
Lung and Bronchus	681	44.1	Female Breast	376	24.5
Colon and Rectum	507	33.6	Colon and Rectum	194	12.9
Corpus Uteri	410	25.6	Pancreas	174	12.0
Endocrine	248	16.2	Corpus Uteri	120	7.9
Pancreas	198	13.3	Liver	85	5.4
Kidney	197	12.8	Ovary	68	4.5
Multiple Myeloma	176	11.8	Multiple Myeloma	62	4.3
Non-Hodgkin Lymphoma	178	11.5	Stomach	49	3.5
Ovary	140	9.1	Leukemia	46	3.1

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.

Cancers of the urinary bladder and female breast include *in situ* cases.

Brain and other central nervous system cancer excludes benign cases.

Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 12: 2012 – 2016 Top Five Cancer Incidence and Mortality Sites by Age Group, Race and Gender

White Males

Incidence			Mortality		
Ages 0 to 19					
	Cases	**Rate**		**Deaths**	**Rate**
Brain and Other CNS	173	3.9	Brain and Other CNS	33	0.7
Leukemia	99	2.2	Leukemia	26	0.6
Hodgkin Disease	59	1.3	Soft Tissue	17	0.4
Testes	57	1.3	Endocrine	13	0.3
Soft Tissue	55	1.2	Bone	10	0.2
Ages 20 to 44					
	Cases	**Rate**		**Deaths**	**Rate**
Testes	756	12.8	Colon and Rectum	117	2.0
Melanoma (Skin)	697	11.8	Brain and Other CNS	96	1.6
Colon and Rectum	525	8.9	Lung and Bronchus	82	1.4
Endocrine	385	6.5	Leukemia	65	1.1
Kidney	352	6.0	Melanoma (Skin)	46	0.8
Ages 45 to 64					
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	8,695	181.5	Lung and Bronchus	3,291	68.7
Lung and Bronchus	5,039	105.2	Colon and Rectum	930	19.4
Colon and Rectum	3,250	67.8	Liver	847	17.7
Melanoma (Skin)	2,840	59.3	Pancreas	745	15.5
Oral Cavity	2,241	46.8	Esophagus	543	11.3
Ages 65 and above					
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	13,720	524.1	Lung and Bronchus	9,103	347.7
Lung and Bronchus	12,110	462.6	Prostate	2,764	105.6
Urinary Bladder	5,741	219.3	Colon and Rectum	1,991	76.1
Melanoma (Skin)	4,713	180.0	Pancreas	1,733	66.2
Colon and Rectum	4,567	174.5	Leukemia	1,289	49.2

Rates are per 100,000 persons.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
Rates based on counts less than 16 are unstable and should be used with caution.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 12 (continued): 2012 – 2016 Top Five Cancer Incidence and Mortality Sites by Age Group, Race and Gender

White Females

Incidence			Mortality		
Ages 0 to 19					
	Cases	**Rate**		**Deaths**	**Rate**
Brain and Other CNS	133	3.2	Leukemia	19	0.5
Endocrine	76	1.8	Brain and Other CNS	16	0.4
Leukemia	52	1.2	Bone	9	0.2
Hodgkin Disease	42	1.0	Soft Tissue	7	0.2
Bone	38	0.9	Endocrine	4	0.1
Ages 20 to 44					
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	3,294	57.4	Female Breast	214	3.7
Endocrine	1,334	23.2	Lung and Bronchus	86	1.5
Melanoma (Skin)	1,053	18.3	Cervix Uteri	84	1.5
Cervix Uteri	525	9.1	Colon and Rectum	80	1.4
Colon and Rectum	484	8.4	Brain and Other CNS	66	1.1
Ages 45 to 64					
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	16,592	331.2	Lung and Bronchus	2,442	48.8
Lung and Bronchus	4,380	87.4	Female Breast	1,470	29.3
Corpus Uteri	2,945	58.8	Colon and Rectum	654	13.1
Colon and Rectum	2,483	49.6	Pancreas	482	9.6
Melanoma (Skin)	2,188	43.7	Ovary	420	8.4
Ages 65 and above					
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	17,695	533.7	Lung and Bronchus	7,206	217.4
Lung and Bronchus	10,408	313.9	Female Breast	2,971	89.6
Colon and Rectum	4,580	138.1	Colon and Rectum	1,964	59.2
Corpus Uteri	2,724	82.2	Pancreas	1,724	52.0
Non-Hodgkin Lymphoma	2,321	70.0	Ovary	1,239	37.4

Rates are per 100,000 persons.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
Rates based on counts less than 16 are unstable and should be used with caution.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 12 (continued): 2012 – 2016 Top Five Cancer Incidence and Mortality Sites by Age Group, Race and Gender

Minority Males

Incidence			Mortality		
Ages 0 to 19					
	Cases	**Rate**		**Deaths**	**Rate**
Brain and Other CNS	59	2.8	Brain and Other CNS	15	0.7
Leukemia	54	2.6	Endocrine	10	0.5
Non-Hodgkin Lymphoma	37	1.8	Leukemia	7	0.3
Hodgkin Disease	25	1.2	Bone	3	0.1
Bone	22	1.1	Kidney	2	0.1
Ages 20 to 44					
	Cases	**Rate**		**Deaths**	**Rate**
Colon and Rectum	186	7.9	Colon and Rectum	45	1.9
Non-Hodgkin Lymphoma	159	6.8	Lung and Bronchus	29	1.2
Kidney	124	5.3	Non-Hodgkin Lymphoma	27	1.2
Testes	100	4.3	Leukemia	25	1.1
Prostate	92	3.9	Brain and Other CNS	20	0.9
Ages 45 to 64					
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	4,892	324.1	Lung and Bronchus	1,225	81.2
Lung and Bronchus	1,814	120.2	Liver	436	28.9
Colon and Rectum	1,325	87.8	Colon and Rectum	435	28.8
Kidney	671	44.5	Pancreas	301	19.9
Liver	651	43.1	Prostate	219	14.5
Ages 65 and above					
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	4,597	842.9	Lung and Bronchus	2,016	369.6
Lung and Bronchus	2,673	490.1	Prostate	1,102	202.1
Colon and Rectum	1,134	207.9	Colon and Rectum	564	103.4
Urinary Bladder	597	109.5	Pancreas	420	77.0
Kidney	554	101.6	Liver	266	48.8

Rates are per 100,000 persons.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
Rates based on counts less than 16 are unstable and should be used with caution.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Table 12 (continued): 2012 – 2016 Top Five Cancer Incidence and Mortality Sites by Age, Race, and Gender

Minority Females

Incidence			Mortality		
Ages 0 to 19					
	Cases	**Rate**		**Deaths**	**Rate**
Brain and Other CNS	51	2.5	Brain and Other CNS	10	0.5
Endocrine	34	1.7	Leukemia	7	0.3
Leukemia	27	1.3	Bone	6	0.3
Hodgkin Disease	22	1.1	Soft Tissue	3	0.1
Non-Hodgkin Lymphoma	19	0.9	Endocrine	3	0.1
			Kidney	1	0.0
Ages 20 to 44					
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	1,566	60.8	Female Breast	178	6.9
Endocrine	379	14.7	Colon and Rectum	43	1.7
Cervix Uteri	199	7.7	Cervix Uteri	29	1.1
Colon and Rectum	196	7.6	Lung and Bronchus	26	1.0
Corpus Uteri	162	6.3	Non-Hodgkin Lymphoma	21	0.8
Ages 45 to 64					
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	5,913	328.5	Female Breast	858	47.7
Lung and Bronchus	1,319	73.3	Lung and Bronchus	757	42.1
Colon and Rectum	1,125	62.5	Colon and Rectum	330	18.3
Corpus Uteri	883	49.1	Pancreas	251	13.9
Endocrine	533	29.6	Corpus Uteri	167	9.3
Ages 65 and above					
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	4,252	521.2	Lung and Bronchus	1,254	153.7
Lung and Bronchus	1,872	229.5	Female Breast	826	101.3
Colon and Rectum	1,190	145.9	Colon and Rectum	604	74.0
Corpus Uteri	880	107.9	Pancreas	542	66.4
Pancreas	608	74.5	Corpus Uteri	357	43.8

Rates are per 100,000 persons.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer exclude benign cases.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.
Rates based on counts less than 16 are unstable and should be used with caution.

Table 13: 2016 Cancer Incidence and Mortality by Race and Ethnicity

	Incidence				Mortality			
	Non-Hispanic Whites		Non-Hispanic Blacks		Non-Hispanic Whites		Non-Hispanic Blacks	
	Cases	Rate	Cases	Rate	Deaths	Rate	Deaths	Rate
All Cancers	42,991	479.9	10,846	470.3	14,703	159.1	4,030	184.2
Oral Cavity	1,231	13.4	249	10.2	250	2.6	79	3.5
Esophagus	386	4.1	89	3.8	340	3.6	64	2.8
Stomach	481	5.2	239	10.8	202	2.2	118	5.6
Colon and Rectum	3,111	35.3	910	40.6	1,132	12.5	371	16.9
Liver	730	7.5	236	9.1	586	6.1	221	8.8
Gallbladder	75	0.8	33	1.5	41	0.4	27	1.2
Pancreas	1,148	12.2	332	14.8	992	10.5	293	13.7
Larynx	350	3.7	101	4.0	79	0.8	48	2.0
Lung and Bronchus	6,388	67.3	1,426	62.6	4,384	46.4	986	44.0
Bone	67	1.0	8	0.3	38	0.5	8	0.4
Soft Tissue	264	3.2	75	3.4	126	1.5	45	2.0
Melanoma (Skin)	2,751	32.5	23	1.2	257	2.9	5	0.3
Female Breast	7,760	168.0	2,140	163.5	910	18.5	340	26.1
Cervix Uteri	245	7.0	98	7.9	75	1.9	37	3.0
Uterus (Corpus, NOS)	1,242	25.4	341	25.0	207	4.0	112	8.5
Ovary	499	10.9	109	8.4	345	6.9	53	4.1
Prostate	4,386	95.7	1,800	174.0	628	16.8	278	40.7
Testes	207	7.2	18	1.8	8	0.2	2	0.2
Urinary Bladder	1,971	21.0	246	11.5	398	4.3	70	3.4
Kidney	1,537	17.2	441	19.0	344	3.8	84	3.9
Endocrine	1,003	14.0	228	10.1	70	0.8	22	1.0
Multiple Myeloma	541	5.8	320	14.5	291	3.2	141	7.1
Leukemia	1,189	13.7	228	10.5	561	6.3	102	4.9
Brain and Other CNS	553	7.0	105	4.7	406	4.6	57	2.5
Hodgkin Disease	170	2.6	55	2.4	16	0.2	2	0.1
Non-Hodgkin Lymphoma	1,572	17.6	325	14.3	481	5.3	79	3.7
Other Cancers	3,134	35.5	671	30.4	1,536	16.6	386	17.3

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer exclude benign cases.
* Incidence counts less than five are suppressed.
Rates based on counts less than 16 are unstable and should be used with caution.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.
Hispanic ethnicity is independent of race. Hispanic ethnicity is determined by self-report and the National Hispanic Identification Algorithm available online at www.naaccr.org/LinkClick.aspx?fileticket=iTvgbzLrx8I%3d&tabid=118&mid=458.
Approximately 17 percent of patients of American Indian race are reported as a different race. Therefore, cancer incidence for American Indians is assumed to be underestimated (Yankaskas BC, Knight K, Fleg A, Rao, C. Misclassification of American Indian Race in State Cancer Data among Non-federally Recognized Indians in North Carolina. *Journal of Registry Management*. 2009;36(1):7-11.).

Table 13 (continued): 2016 Cancer Incidence and Mortality by Race and Ethnicity

	Incidence				Mortality			
	Non-Hispanic Other Races		Hispanics		Non-Hispanic Other Races		Hispanics	
	Cases	Rate	Cases	Rate	Deaths	Rate	Deaths	Rate
All Cancers	1,993	562.2	1,493	350.5	391	123.3	402	127.9
Oral Cavity	29	7.3	28	5.7	10	2.3	3	0.8
Esophagus	7	2.2	5	1.2	1	0.2	2	0.7
Stomach	36	10.6	46	11.2	15	5.1	17	4.2
Colon and Rectum	138	38.9	111	28.3	31	9.8	45	12.6
Liver	33	9.8	58	14.5	21	6.3	35	10.3
Gallbladder	*	*	7	1.8	5	1.7	3	1.3
Pancreas	35	10.4	48	14.3	22	7.0	24	8.0
Larynx	11	3.7	12	2.6	3	0.8	0	0.0
Lung and Bronchus	168	51.0	112	36.8	118	37.4	85	29.6
Bone	6	1.6	*	*	0	0.0	1	0.1
Soft Tissue	14	3.0	22	4.1	6	1.8	7	2.0
Melanoma (Skin)	243	68.9	25	6.2	1	0.2	3	1.0
Female Breast	293	138.9	277	107.3	34	17.4	35	17.0
Cervix Uteri	14	6.0	34	10.9	4	2.3	4	1.6
Uterus (Corpus, NOS)	55	27.6	71	29.1	4	1.6	8	6.0
Ovary	24	12.1	32	12.9	14	7.1	12	8.1
Prostate	398	265.0	113	76.0	18	20.2	12	14.4
Testes	10	4.2	23	4.3	0	0.0	2	0.4
Urinary Bladder	38	11.9	29	9.3	7	3.0	5	2.4
Kidney	46	12.6	62	13.8	5	1.8	7	2.3
Endocrine	57	13.1	70	10.8	4	1.1	5	1.2
Multiple Myeloma	22	6.6	31	9.2	5	1.7	13	4.1
Leukemia	86	26.6	48	11.2	9	2.9	19	6.4
Brain and Other CNS	30	7.3	21	3.1	12	3.2	10	1.4
Hodgkin Disease	10	2.5	13	2.6	1	0.4	0	0.0
Non-Hodgkin Lymphoma	46	12.1	70	14.9	11	3.8	13	4.1
Other Cancers	142	42.6	122	30.5	30	8.9	32	11.6

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
* Incidence counts less than five are suppressed.
Rates based on counts less than 16 are unstable and should be used with caution.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.
Hispanic ethnicity is independent of race. Hispanic ethnicity is determined by self-report and the National Hispanic Identification Algorithm available online at www.naaccr.org/LinkClick.aspx?fileticket=iTvgbzLrx8I%3d&tabid=118&mid=458.
Approximately 17 percent of patients of American Indian race are reported as a different race. Therefore, cancer incidence for American Indians is assumed to be underestimated (Yankaskas BC, Knight K, Fleg A, Rao, C. Misclassification of American Indian Race in State Cancer Data among Non-federally Recognized Indians in North Carolina. *Journal of Registry Management*. 2009;36(1):7-11.).

Table 14: 2016 Top Ten Cancer Incidence and Mortality Sites by Race and Ethnicity

Non-Hispanic Whites

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	7,760	168.0	Lung and Bronchus	4,384	46.4
Prostate	4,386	95.7	Female Breast	910	18.5
Lung and Bronchus	6,388	67.3	Prostate	628	16.8
Colon and Rectum	3,111	35.3	Colon and Rectum	1,132	12.5
Melanoma (Skin)	2,751	32.5	Pancreas	992	10.5
Corpus Uteri	1,242	25.4	Ovary	345	6.9
Urinary Bladder	1,971	21.0	Leukemia	561	6.3
Non-Hodgkin Lymphoma	1,572	17.6	Liver	586	6.1
Kidney	1,537	17.2	Non-Hodgkin Lymphoma	481	5.3
Endocrine	1,003	14.0	Brain and Other CNS	406	4.6

Non-Hispanic Blacks

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	1,800	174.0	Lung and Bronchus	986	44.0
Female Breast	2,140	163.5	Prostate	278	40.7
Lung and Bronchus	1,426	62.6	Female Breast	340	26.1
Colon and Rectum	910	40.6	Colon and Rectum	371	16.9
Corpus Uteri	341	25.0	Pancreas	293	13.7
Kidney	441	19.0	Liver	221	8.8
Pancreas	332	14.8	Corpus Uteri	112	8.5
Multiple Myeloma	320	14.5	Multiple Myeloma	141	7.1
Non-Hodgkin Lymphoma	325	14.3	Stomach	118	5.6
Urinary Bladder	246	11.5	Leukemia	102	4.9

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
Rates based on counts less than 16 are unstable and should be used with caution.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.
Hispanic ethnicity is independent of race. Hispanic ethnicity is determined by self-report and the National Hispanic Identification Algorithm available online at www.naaccr.org/LinkClick.aspx?fileticket=iTvgbzLrx8I%3d&tabid=118&mid=458.
Approximately 17 percent of patients of American Indian race are reported as a different race. Therefore, cancer incidence for American Indians is assumed to be underestimated (Yankaskas BC, Knight K, Fleg A, Rao, C. Misclassification of American Indian Race in State Cancer Data among Non-federally Recognized Indians in North Carolina. *Journal of Registry Management*. 2009;36(1):7-11.).

Table 14 (continued): 2016 Top Ten Cancer Incidence and Mortality Sites by Race and Ethnicity

Non-Hispanic Other Races

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Prostate	398	265.0	Lung and Bronchus	118	37.4
Female Breast	293	138.9	Prostate	18	20.2
Melanoma (Skin)	243	68.9	Female Breast	34	17.4
Lung and Bronchus	168	51.0	Colon and Rectum	31	9.8
Colon and Rectum	138	38.9	Ovary	14	7.1
Corpus Uteri	55	27.6	Pancreas	22	7.0
Leukemia	86	26.6	Liver	21	6.3
Endocrine	57	13.1	Stomach	15	5.1
Kidney	46	12.6	Non-Hodgkin Lymphoma	11	3.8
Non-Hodgkin Lymphoma	46	12.1	Brain and Other CNS	12	3.2

Hispanics

Incidence			Mortality		
	Cases	**Rate**		**Deaths**	**Rate**
Female Breast	277	107.3	Lung and Bronchus	85	29.6
Prostate	113	76.0	Female Breast	35	17.0
Lung and Bronchus	112	36.8	Prostate	12	14.4
Corpus Uteri	71	29.1	Colon and Rectum	45	12.6
Colon and Rectum	111	28.3	Liver	35	10.3
Non-Hodgkin Lymphoma	70	14.9	Ovary	12	8.1
Liver	58	14.5	Pancreas	24	8.0
Pancreas	48	14.3	Leukemia	19	6.4
Kidney	62	13.8	Corpus Uteri	8	6.0
Ovary	32	12.9	Stomach	17	4.2

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. Census.
Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
Rates based on counts less than 16 are unstable and should be used with caution.
Rates are calculated using the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.
Hispanic ethnicity is independent of race. Hispanic ethnicity is determined by self-report and the National Hispanic Identification Algorithm available online at www.naaccr.org/LinkClick.aspx?fileticket=iTvgbzLrx8I%3d&tabid=118&mid=458.
Approximately 17 percent of patients of American Indian race are reported as a different race. Therefore, cancer incidence for American Indians is assumed to be underestimated (Yankaskas BC, Knight K, Fleg A, Rao, C. Misclassification of American Indian Race in State Cancer Data among Non-federally Recognized Indians in North Carolina. *Journal of Registry Management*. 2009;36(1):7-11.).

Table 15: 2016 Cancer Incidence and Mortality Median Age

Incidence

	All	Males	Females	Non-Hispanic Whites	Non-Hispanic Blacks	Non-Hispanic Others	Hispanics
All Cancers	66	67	65	67	64	63	56
Oral Cavity	64	63	67	65	60	60	54
Esophagus	68	68	68	68	65	70	57
Stomach	67.5	67	68	69	64	68	56.5
Colon and Rectum	66	65	67	66	64	61	57
Liver	64	63	66	66	62	67	62.5
Gallbladder	71	73	70	74	67	*	58
Pancreas	69	68	70	70	66	61	66.5
Larynx	65	65	60	65	64	73	58.5
Lung and Bronchus	70	70	69	70	67	67	67
Bone	48	47.5	49	51	34	34.5	*
Soft Tissue	61	63.5	60	66	57	35.5	53.5
Melanoma (Skin)	65	68	60	66	73	61	59
Female Breast	63	.	63	64	62	56	51
Cervix Uteri	51	.	51	49	57	52	43
Uterus (Corpus, NOS)	64	.	64	64	64	61	55
Ovary	62	.	62	64	61	49	53.5
Prostate	66	66	.	67	64	67	66
Testes	33	33	.	33	36	27.5	32
Urinary Bladder	72	72	71	72	70	67	66
Kidney	65	64	65	65	64	61	54.5
Endocrine	51	57	49	52	52	47	41
Multiple Myeloma	69	69	69	70	67	68.5	65
Leukemia	69	68	70	70	65.5	65.5	48
Brain and Other CNS	60	59	61	62	52	21.5	43
Hodgkin Disease	35	39	30	35	30	50	39
Non-Hodgkin Lymphoma	68	67	68	69	61	61	55.5
Other Cancers	69	69	70	71	65	62	58

Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
*Median ages based on incidence counts less than five are suppressed.

Table 15 (continued): 2016 Cancer Incidence and Mortality Median Age

Mortality

	All	Males	Females	Non-Hispanic Whites	Non-Hispanic Blacks	Non-Hispanic Others	Hispanics
All Cancers	71	71	72	72	68	67	64
Oral Cavity	68	67	70	69	65	64	56
Esophagus	68	67	70	68	66	59	63
Stomach	70.5	69	74	72	69.5	71	56.5
Colon and Rectum	69	68	72	70	68	66	55.5
Liver	66	65	69	67	63	65	63
Gallbladder	71	71.5	69	73	69	61	73
Pancreas	71	70	73	72	68	60.5	69.5
Larynx	67	66	73	68	66	59	.
Lung and Bronchus	71	70	71	72	68	69	69
Bone	59	58	73	61.5	58.5	.	41
Soft Tissue	67	68	65	70.5	61	54.5	60
Melanoma (Skin)	70	70	71	70	75	48	68.5
Female Breast	68	.	68	70	64	60.5	55
Cervix Uteri	56	.	56	57	56	61.5	48
Uterus (Corpus, NOS)	69	.	69	70	68	66.5	72
Ovary	73	.	73	73	69	63.5	68
Prostate	79	79	.	80	76	81.5	78
Testes	55.5	55.5	.	58.5	52	.	26.5
Urinary Bladder	77	77	77.5	78.5	72	86	83
Kidney	70	68	75	70	69	71	65
Endocrine	68	68	69.5	70	61	64.5	53
Multiple Myeloma	74	74	75	75	73	72	58
Leukemia	75	74	76	76	69	73	56
Brain and Other CNS	67	64	69	68	64	50.5	40.5
Hodgkin Disease	75	74.5	75	76	50	75	.
Non-Hodgkin Lymphoma	75	73	76	75	68	72	68.5
Other Cancers	73	72	75	75	67	65.5	70

Cancers of the urinary bladder and female breast include *in situ* cases.
Brain and other central nervous system cancer excludes benign cases.
*Median ages based on incidence counts less than five are suppressed.

Figure 1a: 2005 – 2016 Colorectal Cancer Incidence Trends by Gender and Race

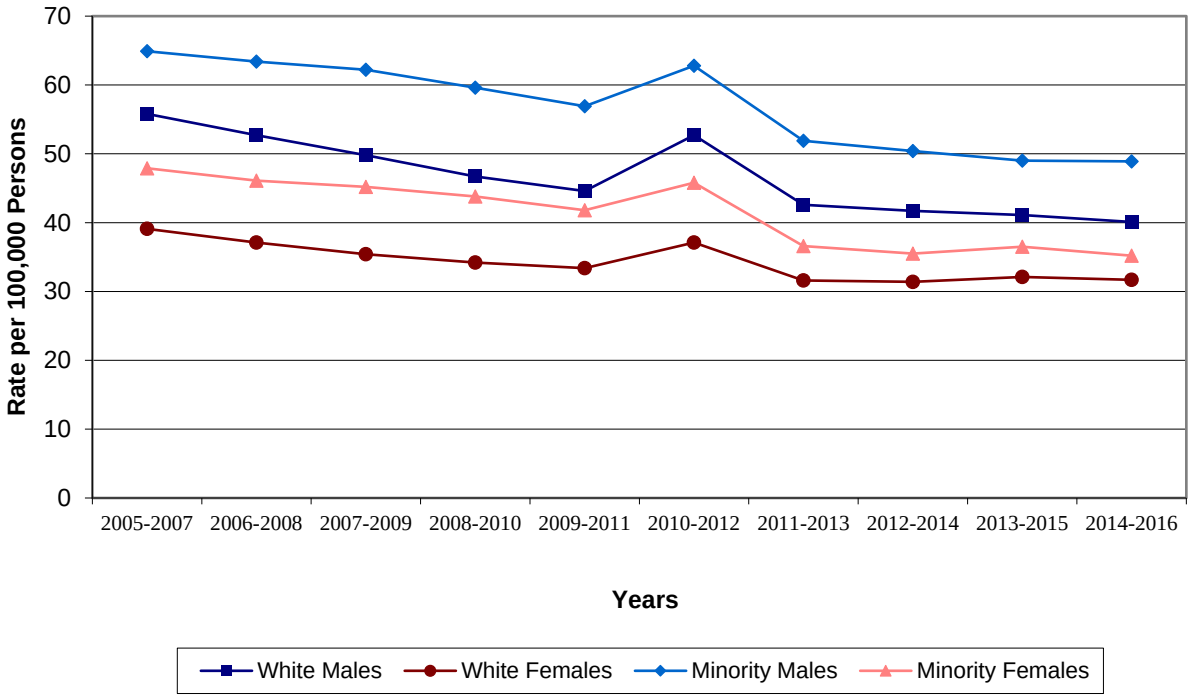


Figure 1b: 2005 – 2016 Colorectal Cancer Mortality Trends by Gender and Race

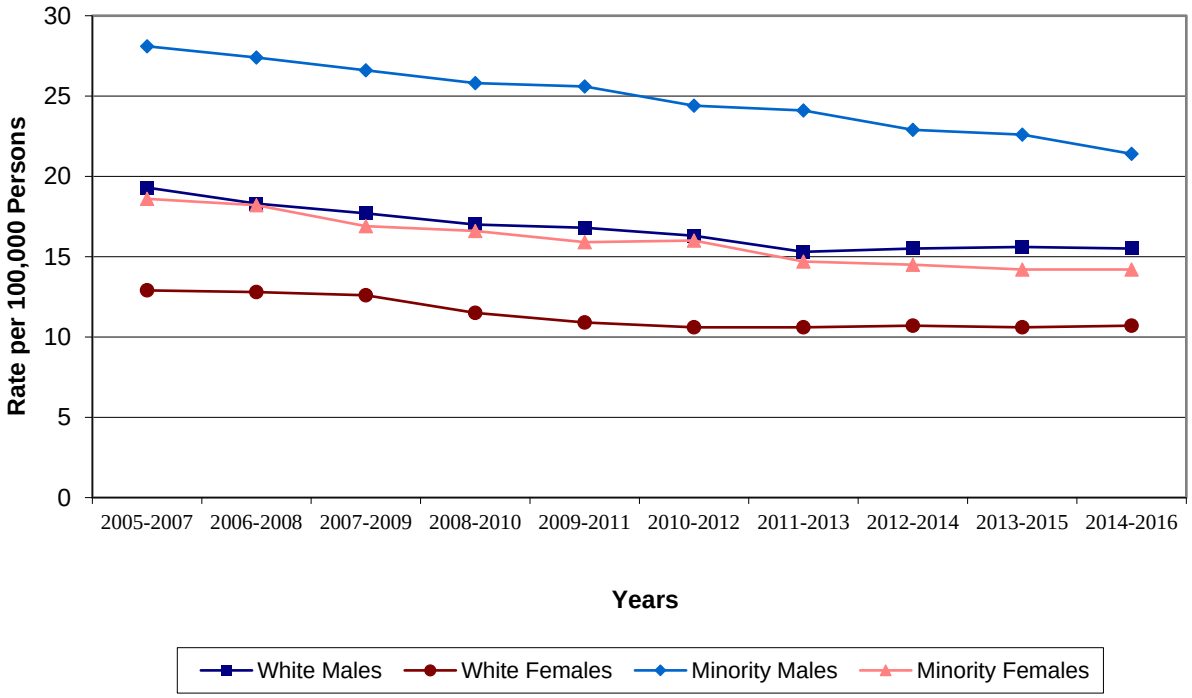


Figure 2a: 2005 – 2016 Lung and Bronchus Cancer Incidence Trends by Gender and Race

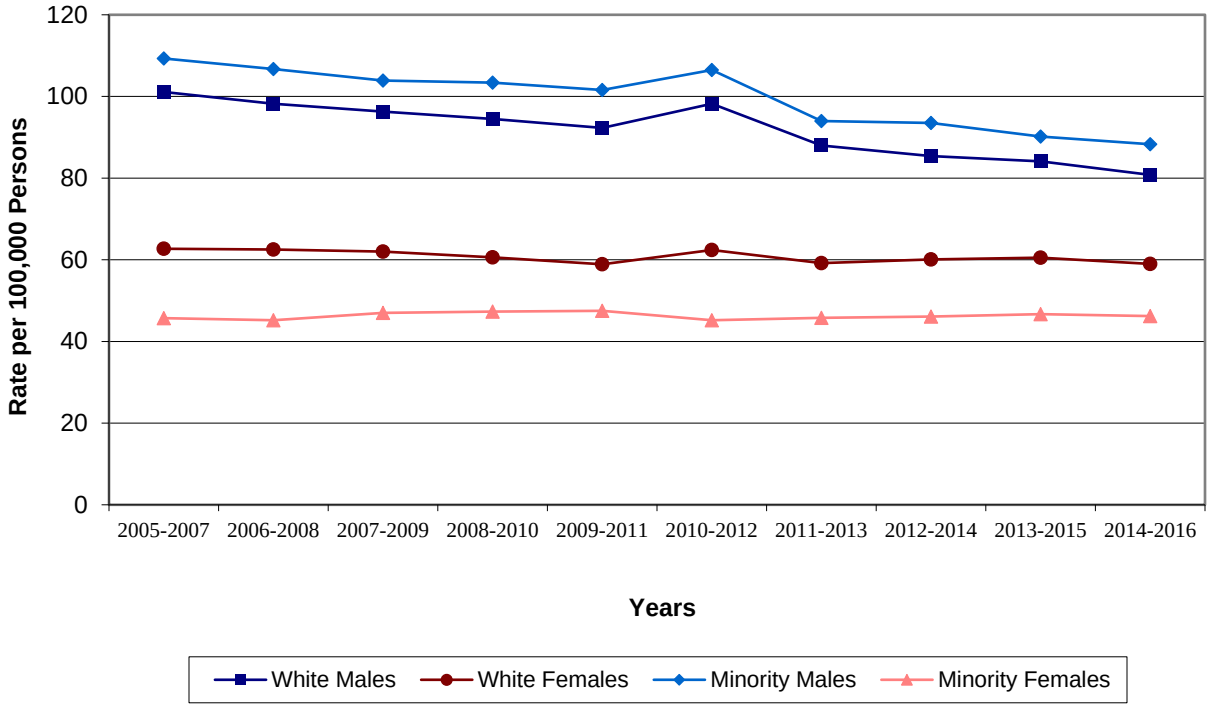


Figure 2b: 2005 – 2016 Lung and Bronchus Cancer Mortality Trends by Gender and Race

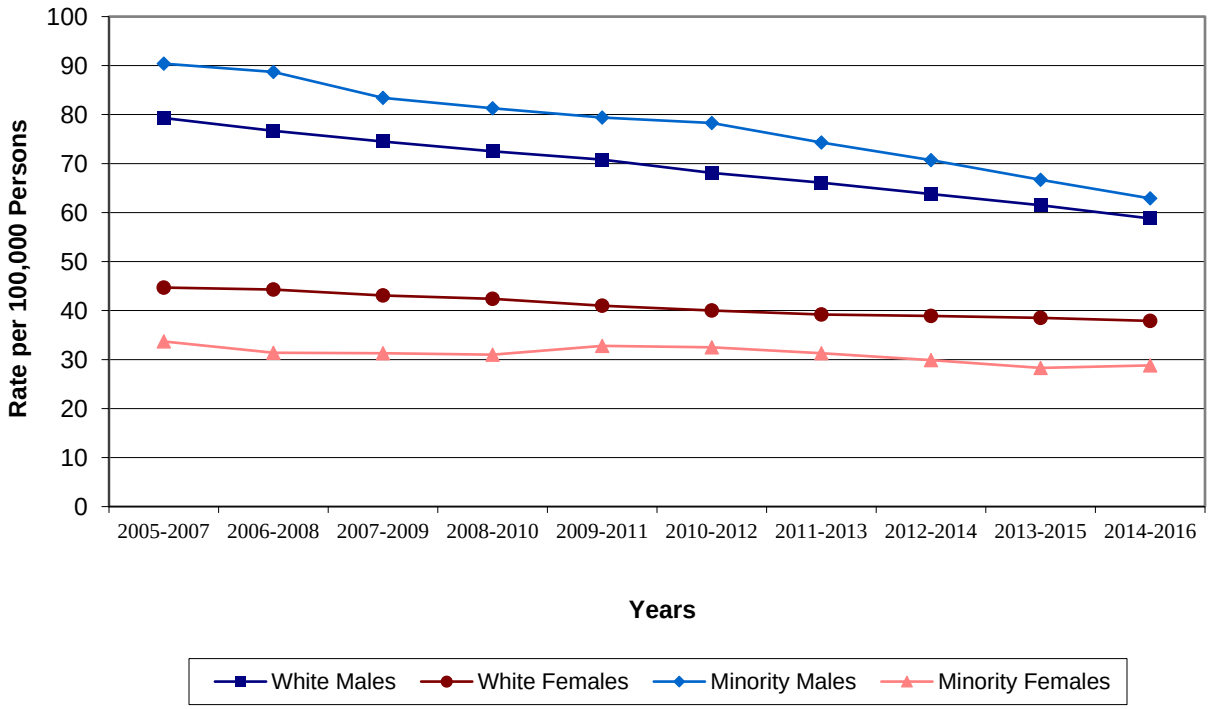


Figure 3a: 2005 – 2016 Female Breast Cancer Incidence Trends by Race

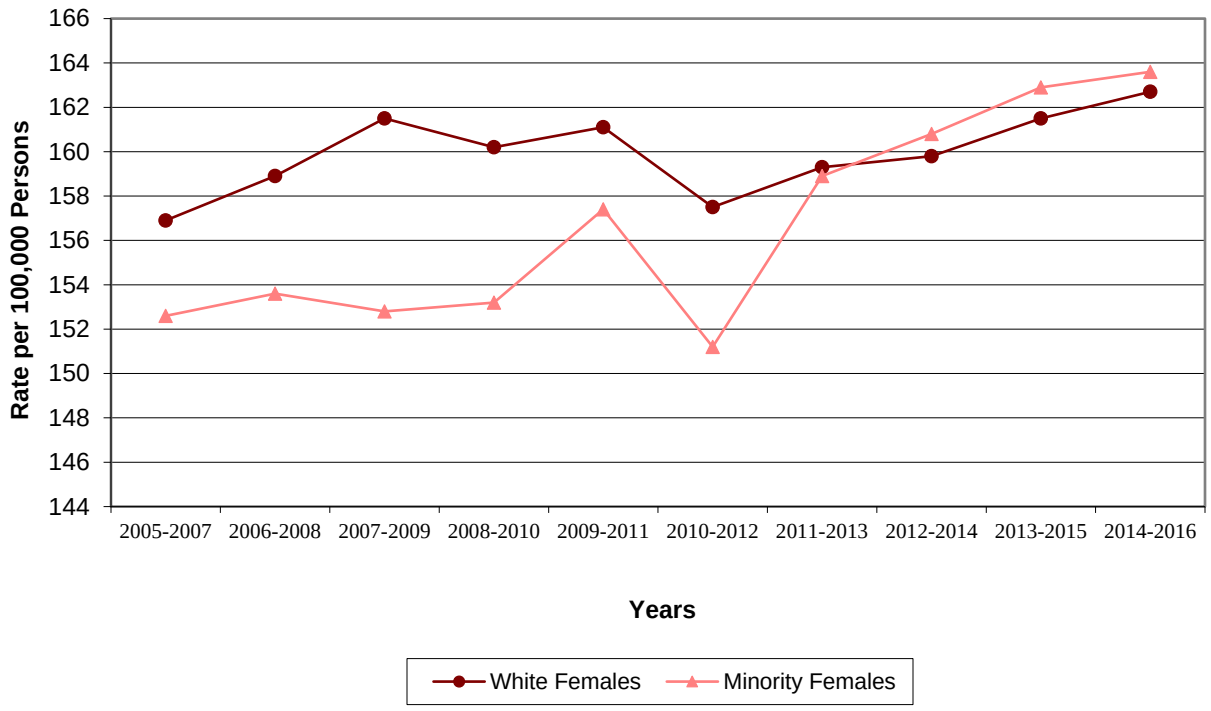


Figure 3b: 2005 – 2016 Female Breast Cancer Mortality Trends by Race

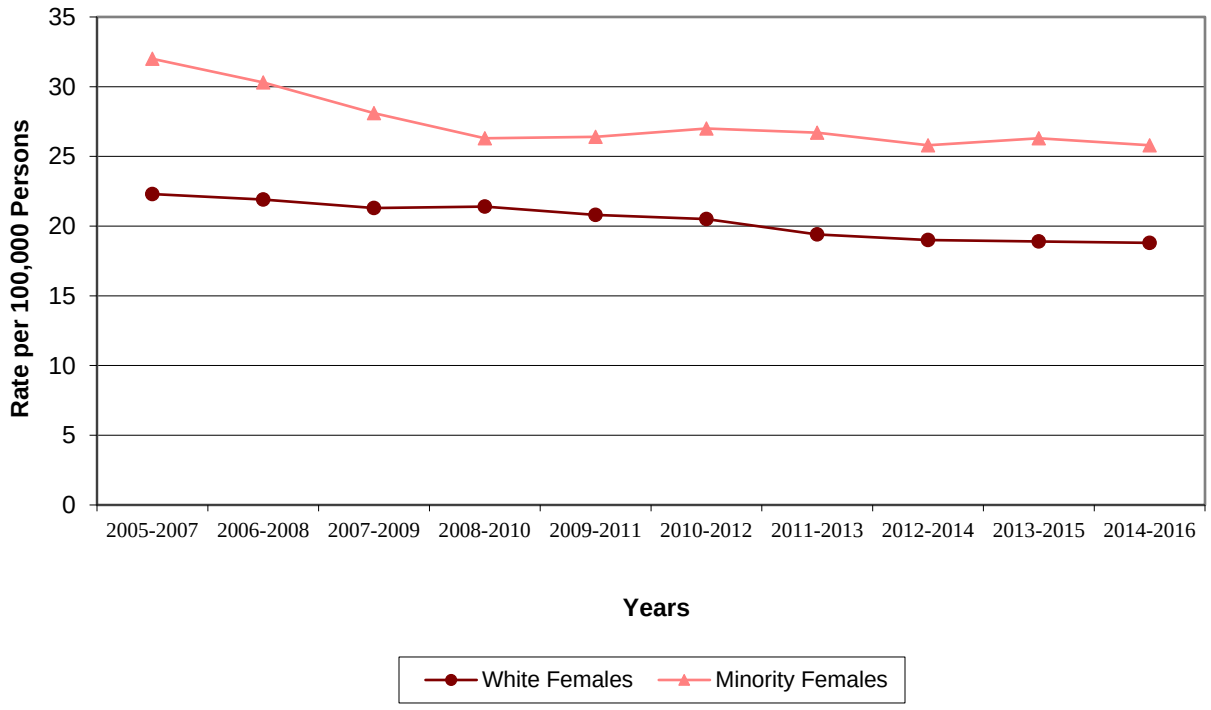


Figure 4a: 2005 – 2016 Prostate Cancer Incidence Trends by Race

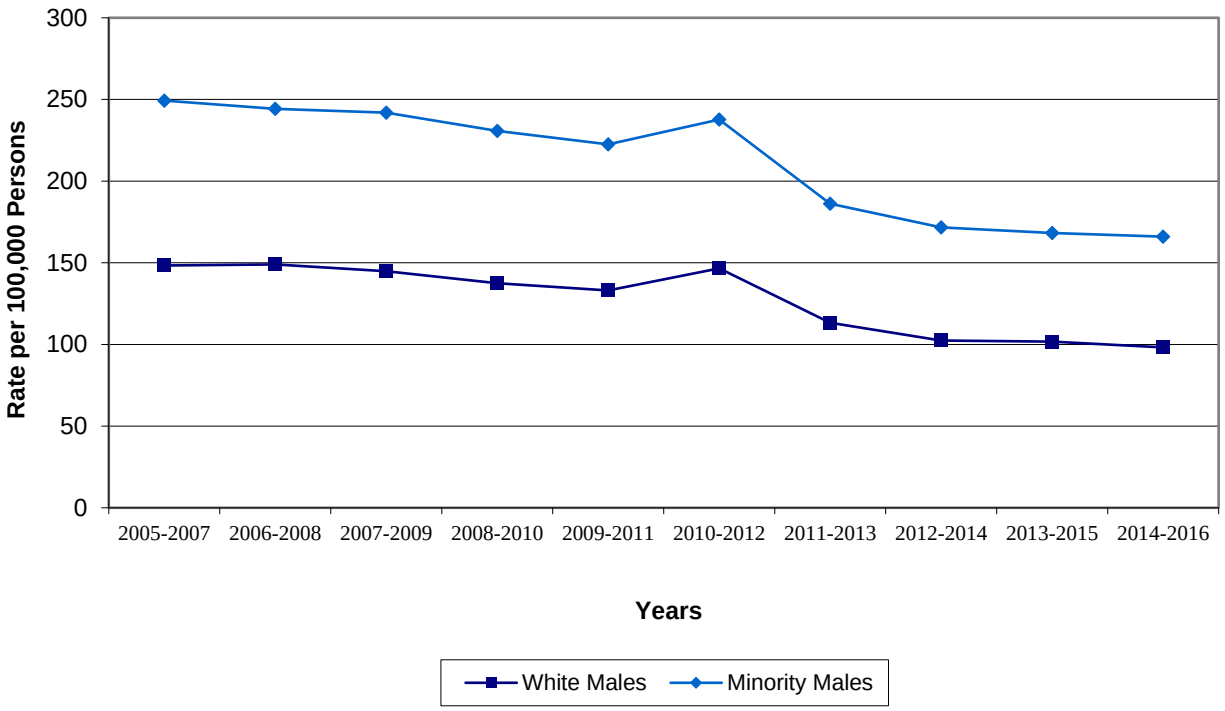


Figure 4b: 2005 – 2016 Prostate Cancer Mortality Trends by Race

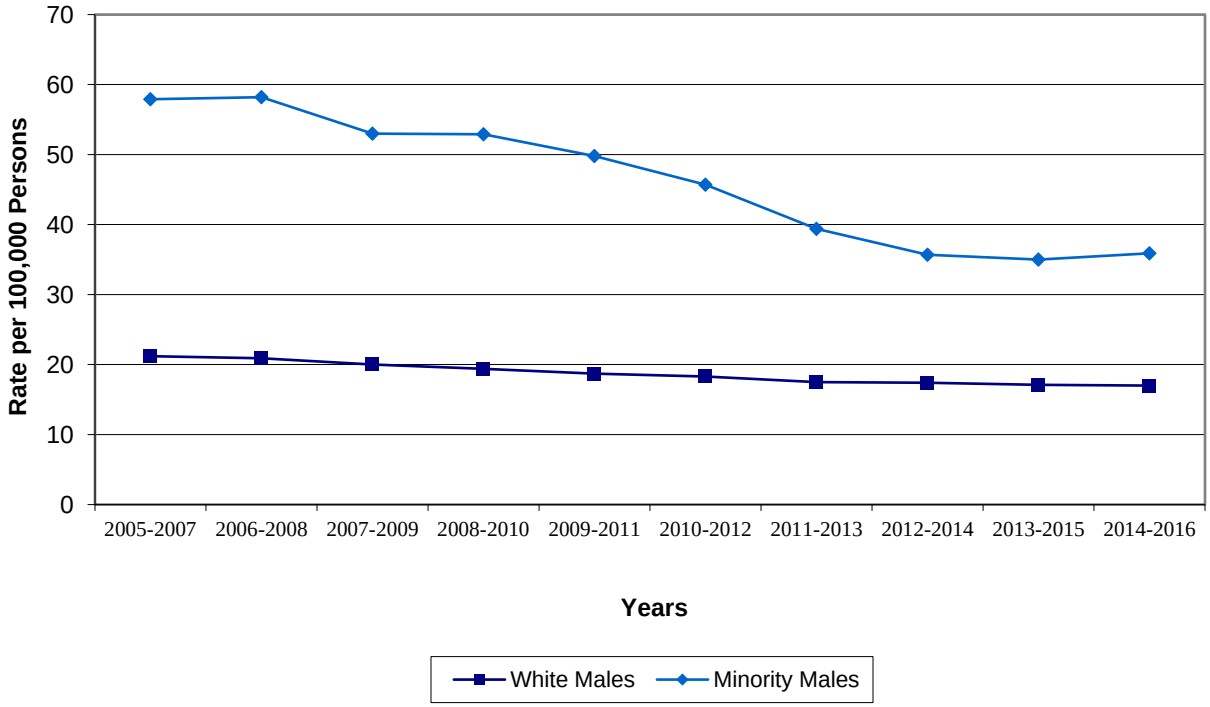


Figure 5a: 2005 – 2016 Cervical Cancer Incidence Trends by Race

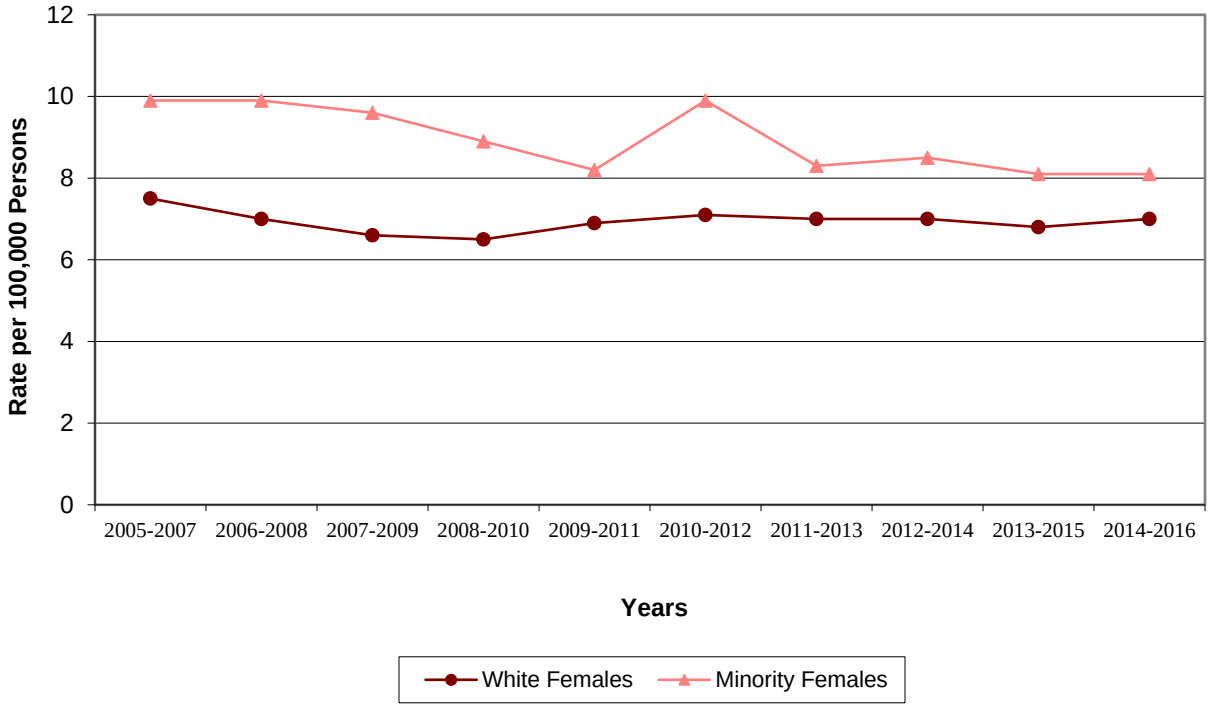


Figure 5b: 2005 – 2016 Cervical Cancer Mortality Trends by Race

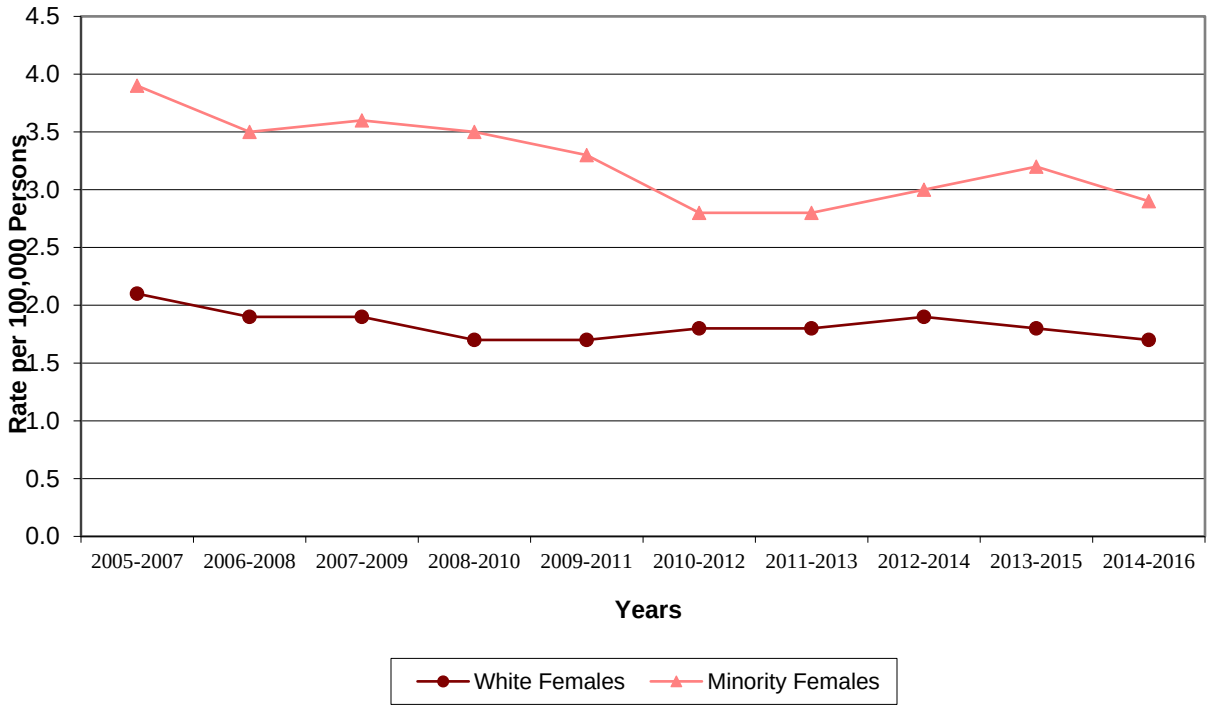


Figure 6: 2005 – 2016 Oral Cavity Cancer Incidence Trends by Gender and Race

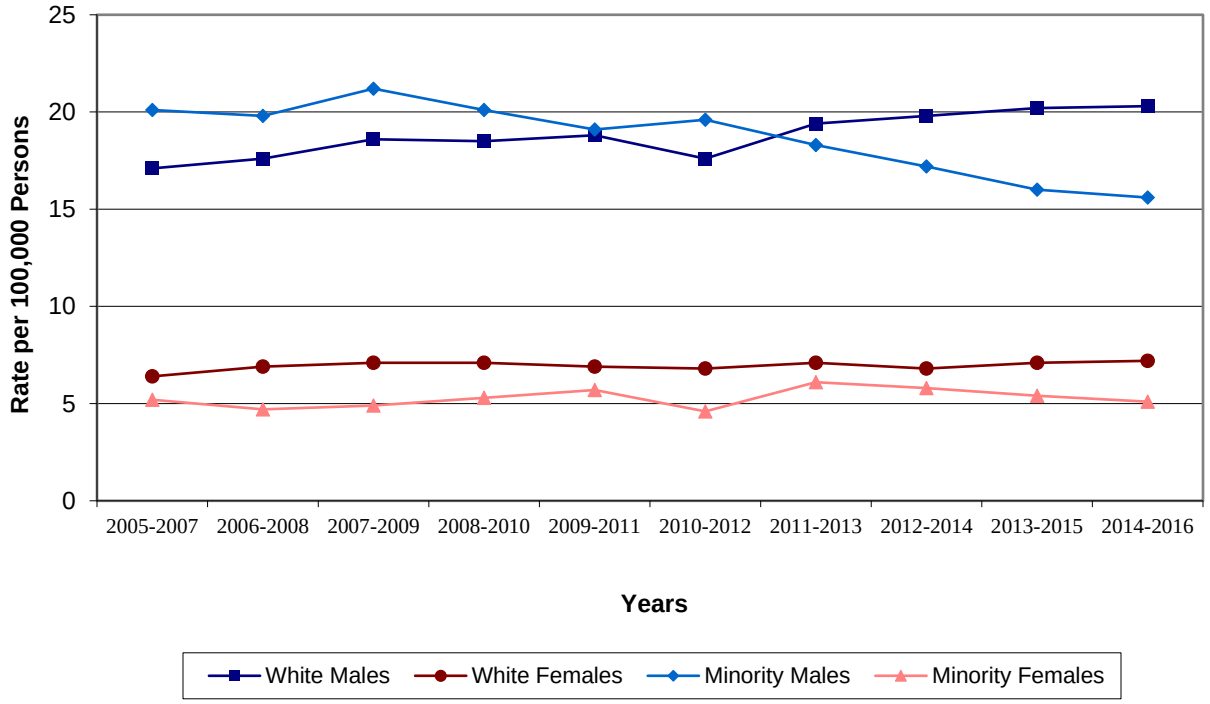


Figure 7: 2005 – 2016 Laryngeal Cancer Incidence Trends by Gender and Race

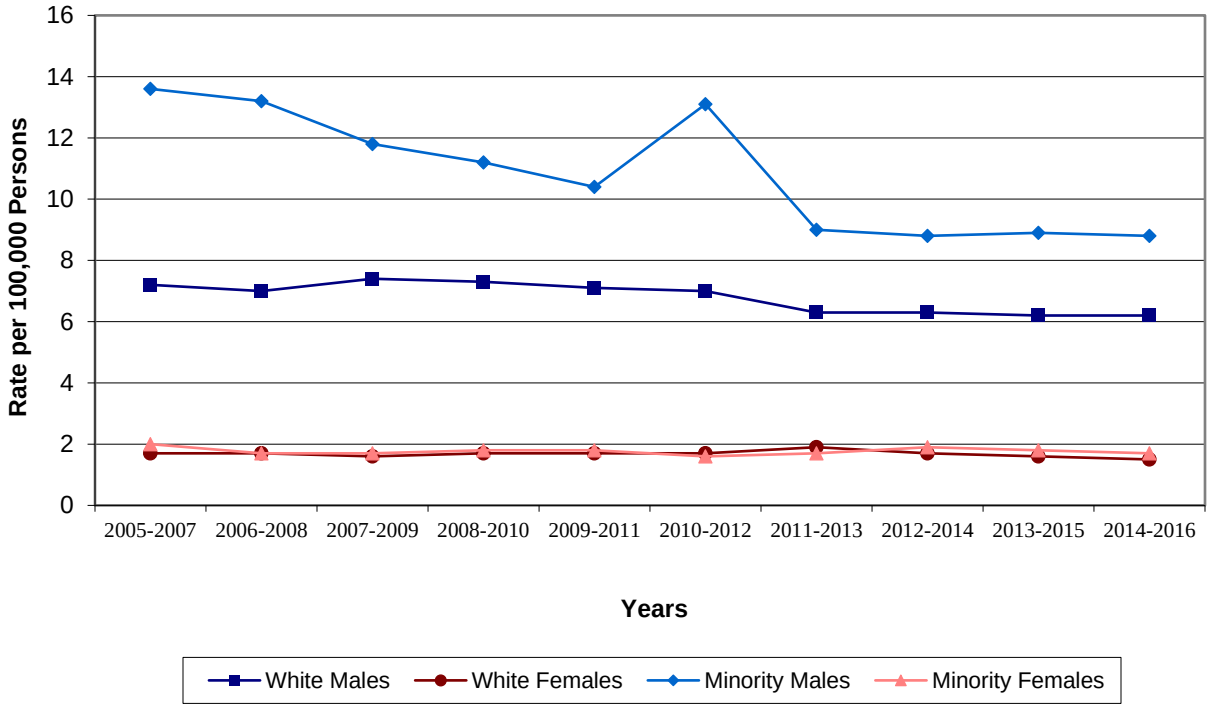


Figure 8: 2005 – 2016 Melanoma Incidence Trends by Gender and Race

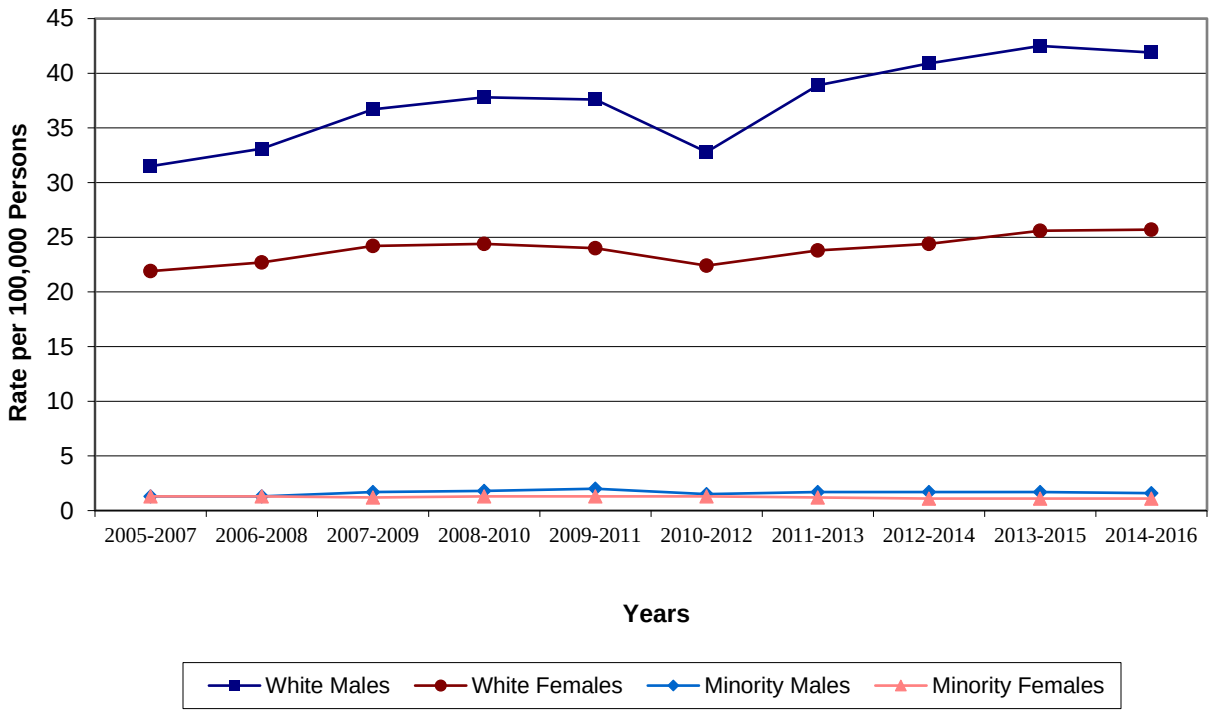


Figure 9: 2005 – 2016 Kidney Cancer Incidence Trends by Gender and Race

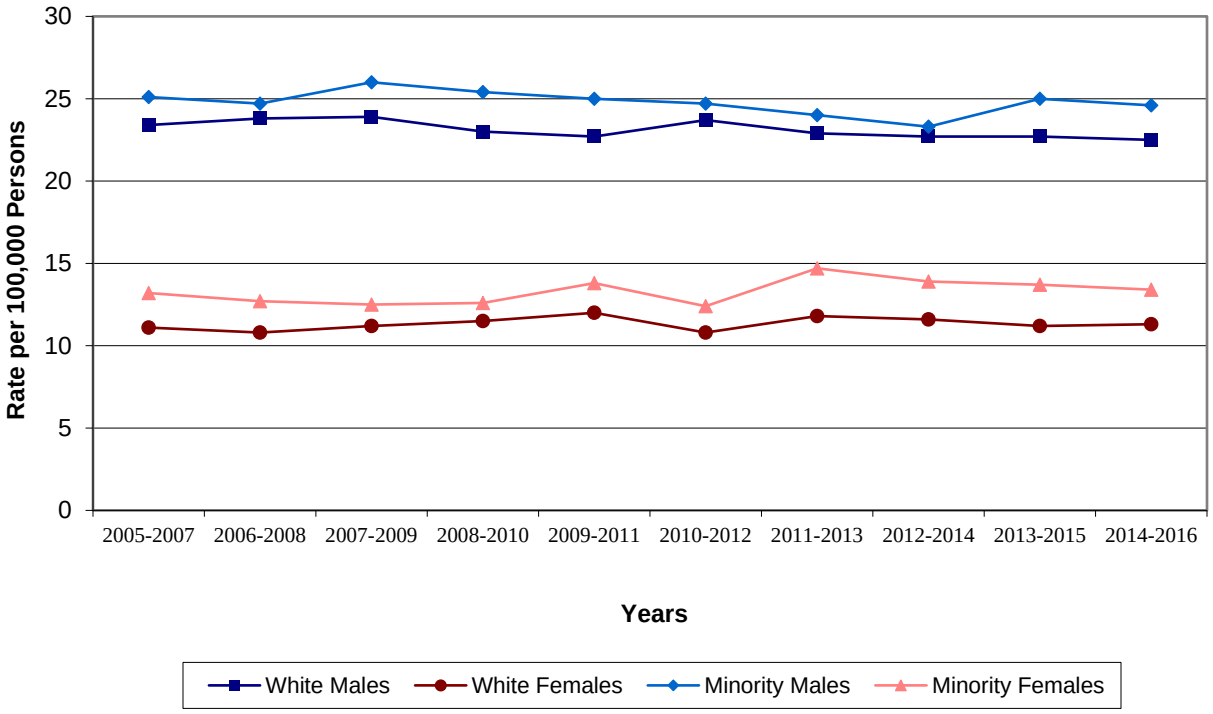


Figure 10: 2005 – 2016 Endocrine Cancer Incidence Trends by Gender and Race

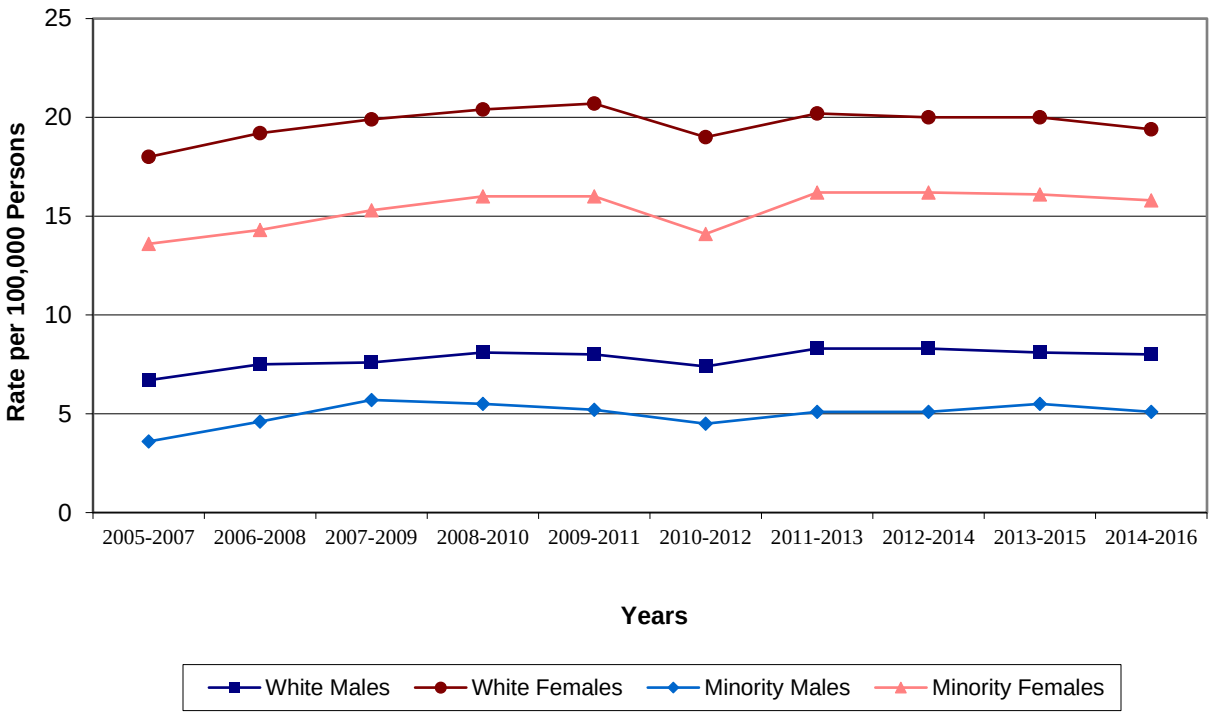


Figure 11: 2005 – 2016 Stomach Cancer Mortality Trends by Gender and Race

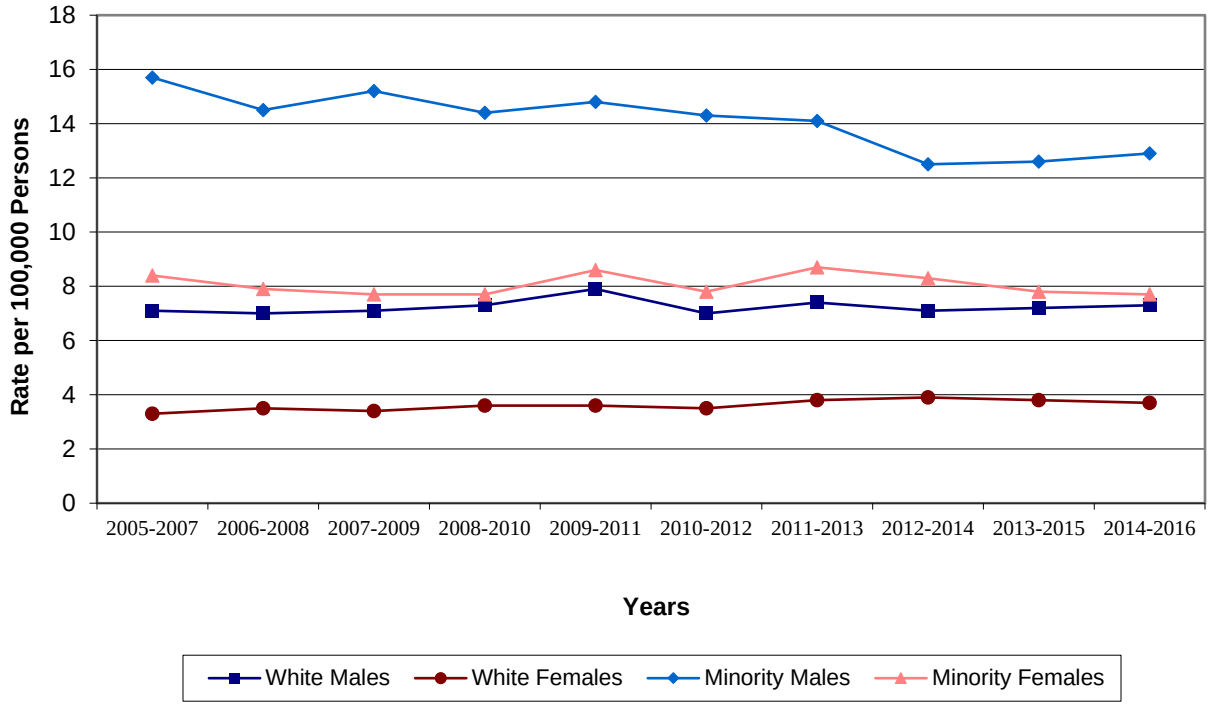


Figure 12: 2005 – 2016 Liver Cancer Mortality Trends by Gender and Race

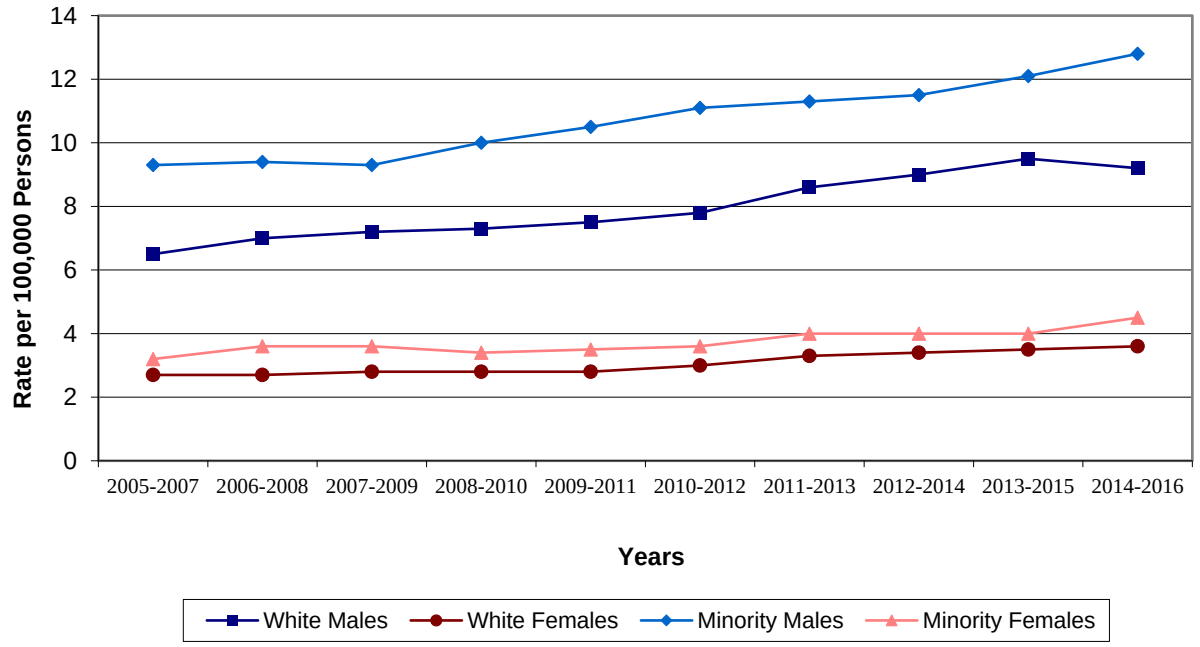


Figure 13: 2005 – 2016 Pancreatic Cancer Mortality Trends by Gender and Race

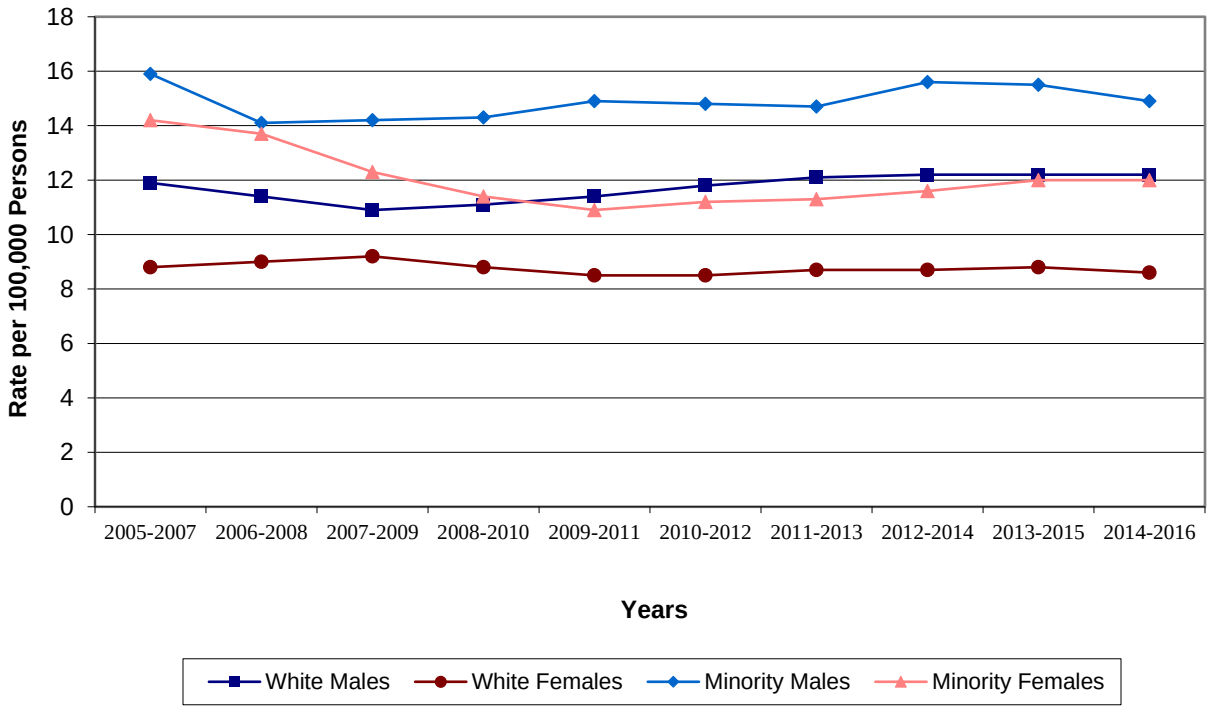
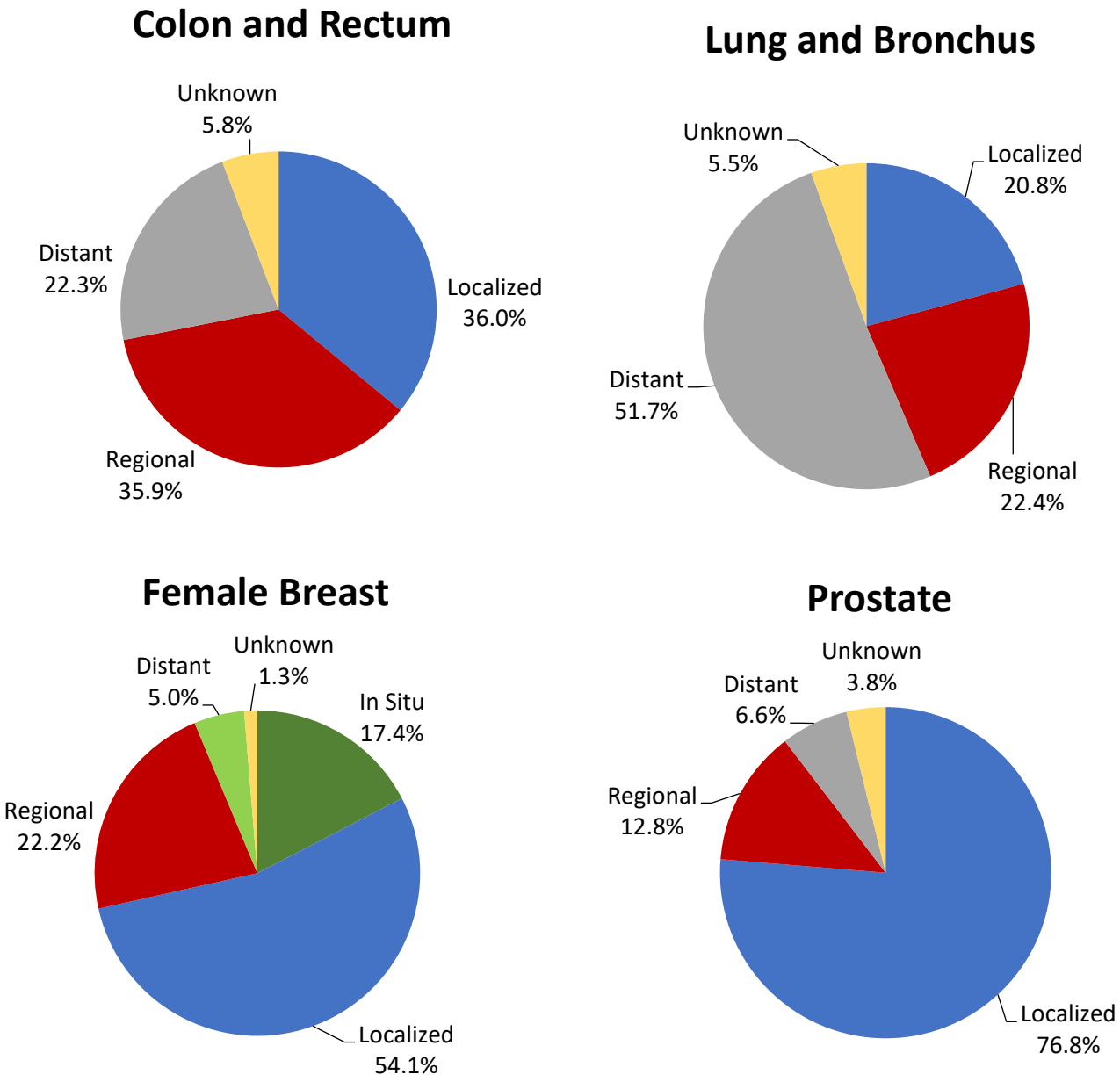


Figure 14: 2016 Percent of Top Four Cancer Cases by Stage



Appendix A: 2016 Population Estimates by Race and County

	Whites	Blacks	American Indian	Asian/ Pacific Islander	Total
North Carolina	7,321,854	2,333,950	170,118	330,767	10,156,689
Alamance	120,851	33,089	2,366	3,019	159,325
Alexander	34,218	2,416	196	440	37,270
Alleghany	10,557	231	64	93	10,945
Anson	12,181	12,398	232	308	25,119
Ashe	26,169	333	90	162	26,754
Avery	16,461	834	103	102	17,500
Beaufort	34,322	12,259	491	289	47,361
Bertie	7,089	12,080	132	148	19,449
Bladen	20,739	11,867	1,059	131	33,796
Brunswick	109,770	14,183	1,165	1,235	126,353
Buncombe	231,811	17,838	1,482	4,203	255,334
Burke	77,884	5,993	828	4,097	88,802
Cabarrus	154,613	37,365	1,555	8,040	201,573
Caldwell	76,166	4,452	482	687	81,787
Camden	8,715	1,376	57	275	10,423
Carteret	62,818	4,475	486	1,076	68,855
Caswell	14,791	7,672	160	119	22,742
Catawba	133,868	14,920	921	6,938	156,647
Chatham	58,037	9,401	869	1,517	69,824
Cherokee	26,582	560	508	233	27,883
Chowan	9,018	5,008	64	150	14,240
Clay	10,553	178	47	41	10,819
Cleveland	74,712	20,877	382	1,131	97,102
Columbus	36,032	17,718	2,167	418	56,335
Craven	75,169	23,353	783	3,552	102,857
Cumberland	180,239	134,452	6,908	11,939	333,538
Currituck	23,614	1,615	169	266	25,664
Dare	34,080	1,182	192	306	35,760
Davidson	143,827	16,565	1,344	2,768	164,504
Davie	38,331	2,934	295	413	41,973
Duplin	42,228	15,738	869	724	59,559
Durham	166,130	120,975	3,135	16,850	307,090
Edgecombe	21,289	31,349	410	245	53,293
Forsyth	252,980	104,945	3,433	10,256	371,614

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix A (continued): 2016 Population Estimates by Race and County

	Whites	Blacks	American Indian	Asian/ Pacific Islander	Total
Franklin	45,926	17,594	620	519	64,659
Gaston	174,303	37,371	1,355	3,874	216,903
Gates	7,595	3,852	83	63	11,593
Graham	7,743	86	668	51	8,548
Granville	38,289	19,483	545	507	58,824
Greene	12,450	8,040	471	183	21,144
Guilford	304,247	185,899	4,301	27,549	521,996
Halifax	21,064	28,132	2,176	499	51,871
Harnett	95,926	30,220	2,529	2,224	130,899
Haywood	58,672	895	447	374	60,388
Henderson	106,871	4,347	841	1,699	113,758
Hertford	8,817	14,747	329	203	24,096
Hoke	27,334	19,233	5,419	1,122	53,108
Hyde	3,775	1,604	44	53	5,476
Iredell	144,620	22,084	1,056	4,769	172,529
Jackson	36,400	1,149	4,236	483	42,268
Johnston	154,899	32,163	1,922	2,110	191,094
Jones	6,467	3,013	93	52	9,625
Lee	45,312	12,635	842	957	59,746
Lenoir	32,300	24,124	407	601	57,432
Lincoln	75,041	4,931	379	724	81,075
McDowell	42,199	1,933	363	494	44,989
Macon	33,017	646	281	365	34,309
Madison	20,805	400	101	128	21,434
Martin	12,823	9,968	113	177	23,081
Mecklenburg	626,468	354,333	9,389	67,047	1,057,237
Mitchell	14,656	155	138	119	15,068
Montgomery	21,326	5,356	287	469	27,438
Moore	80,125	12,608	1,028	1,631	95,392
Nash	53,188	38,660	970	1,190	94,008
New Hanover	184,570	33,083	1,382	4,199	223,234
Northampton	8,201	11,765	138	62	20,166
Onslow	151,113	33,340	2,060	5,686	192,199
Orange	111,293	18,150	972	12,308	142,723
Pamlico	10,012	2,580	95	112	12,799

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix A (continued): 2016 Population Estimates by Race and County

	Whites	Blacks	American Indian	Asian/ Pacific Islander	Total
Pasquotank	23,583	15,073	268	691	39,615
Pender	48,012	9,786	622	477	58,897
Perquimans	10,069	3,214	62	82	13,427
Person	27,805	10,911	334	233	39,283
Pitt	107,782	64,456	998	4,391	177,627
Polk	19,148	1,018	122	133	20,421
Randolph	129,352	9,940	1,659	2,258	143,209
Richmond	28,326	14,719	1,491	518	45,054
Robeson	42,819	33,218	56,260	1,217	133,514
Rockingham	72,024	18,029	592	714	91,359
Rowan	112,811	23,899	901	1,918	139,529
Rutherford	58,488	7,046	266	505	66,305
Sampson	42,895	17,598	2,247	623	63,363
Scotland	16,360	14,061	4,479	350	35,250
Stanly	51,783	7,355	266	1,476	60,880
Stokes	43,394	2,096	206	195	45,891
Surry	67,793	3,218	442	596	72,049
Swain	9,337	257	4,486	107	14,187
Transylvania	31,611	1,457	147	256	33,471
Tyrrell	2,379	1,531	39	90	4,039
Union	189,297	28,785	1,605	6,853	226,540
Vance	20,565	23,184	366	311	44,426
Wake	733,131	229,924	8,995	77,093	1,049,143
Warren	8,206	10,455	1,146	82	19,889
Washington	5,924	6,047	110	51	12,132
Watauga	51,962	1,181	216	740	54,099
Wayne	79,834	41,486	1,063	2,093	124,476
Wilkes	64,420	3,456	274	484	68,634
Wilson	46,126	33,643	540	1,124	81,433
Yadkin	35,805	1,453	250	218	37,726
Yancey	17,122	244	142	114	17,622

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix B: 2016 Population Estimates by Age Group and County

	0-19	20-44	45-64	65+	Total
North Carolina	2,566,464	3,336,371	2,683,273	1,570,581	10,156,689
Alamance	41,424	48,403	43,118	26,380	159,325
Alexander	8,391	10,934	10,737	7,208	37,270
Alleghany	2,126	2,686	3,246	2,887	10,945
Anson	5,471	8,355	6,938	4,355	25,119
Ashe	5,361	6,928	7,991	6,474	26,754
Avery	3,234	5,705	4,905	3,656	17,500
Beaufort	10,781	12,382	13,492	10,706	47,361
Bertie	3,892	5,719	5,751	4,087	19,449
Bladen	7,871	9,442	9,650	6,833	33,796
Brunswick	22,564	29,450	37,515	36,824	126,353
Buncombe	53,836	83,837	69,385	48,276	255,334
Burke	19,398	25,718	26,385	17,301	88,802
Cabarrus	56,995	65,275	53,424	25,879	201,573
Caldwell	18,591	23,250	24,512	15,434	81,787
Camden	2,656	3,021	3,144	1,602	10,423
Carteret	13,603	18,059	21,012	16,181	68,855
Caswell	4,716	6,395	7,021	4,610	22,742
Catawba	39,101	46,484	44,392	26,670	156,647
Chatham	15,513	17,702	20,384	16,225	69,824
Cherokee	5,402	6,562	8,167	7,752	27,883
Chowan	3,234	3,659	4,030	3,317	14,240
Clay	2,092	2,439	3,081	3,207	10,819
Cleveland	24,124	28,222	27,493	17,263	97,102
Columbus	13,339	17,072	15,180	10,744	56,335
Craven	25,121	35,443	23,912	18,381	102,857
Cumberland	92,682	131,266	71,679	37,911	333,538
Currituck	6,252	7,375	8,058	3,979	25,664
Dare	7,477	9,752	11,412	7,119	35,760
Davidson	40,472	47,232	48,034	28,766	164,504
Davie	9,953	10,981	12,667	8,372	41,973
Duplin	15,967	17,424	15,792	10,376	59,559
Durham	75,274	120,752	74,012	37,052	307,090
Edgecombe	13,407	15,370	14,779	9,737	53,293
Forsyth	98,263	118,230	98,806	56,315	371,614

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix B (continued): 2016 Population Estimates by Age Group and County

	0-19	20-44	45-64	65+	Total
Franklin	16,146	19,239	18,926	10,348	64,659
Gaston	54,498	68,357	60,335	33,713	216,903
Gates	2,650	3,012	3,701	2,230	11,593
Graham	1,967	2,238	2,368	1,975	8,548
Granville	13,617	17,790	17,889	9,528	58,824
Greene	4,878	7,137	5,849	3,280	21,144
Guilford	135,026	174,753	136,589	75,628	521,996
Halifax	12,190	14,667	14,888	10,126	51,871
Harnett	38,630	46,679	30,198	15,392	130,899
Haywood	12,151	16,227	17,422	14,588	60,388
Henderson	24,174	29,775	31,509	28,300	113,758
Hertford	5,684	7,119	6,786	4,507	24,096
Hoke	15,915	20,451	11,902	4,840	53,108
Hyde	1,028	1,769	1,648	1,031	5,476
Iredell	44,393	52,484	49,525	26,127	172,529
Jackson	9,831	14,214	10,288	7,935	42,268
Johnston	54,025	60,741	52,112	24,216	191,094
Jones	2,035	2,542	3,015	2,033	9,625
Lee	16,067	18,376	15,900	9,403	59,746
Lenoir	14,223	16,148	16,229	10,832	57,432
Lincoln	19,154	23,408	24,817	13,696	81,075
McDowell	10,142	13,008	13,060	8,779	44,989
Macon	7,192	8,249	9,439	9,429	34,309
Madison	4,741	6,197	5,998	4,498	21,434
Martin	5,220	5,946	6,915	5,000	23,081
Mecklenburg	280,995	404,680	259,036	112,526	1,057,237
Mitchell	3,036	3,933	4,439	3,660	15,068
Montgomery	6,873	7,724	7,531	5,310	27,438
Moore	21,969	26,172	24,543	22,708	95,392
Nash	23,353	27,782	26,494	16,379	94,008
New Hanover	49,151	79,382	57,230	37,471	223,234
Northampton	4,064	5,106	6,066	4,930	20,166
Onslow	55,092	89,895	30,141	17,071	192,199
Orange	36,621	51,834	35,978	18,290	142,723
Pamlico	2,242	3,146	3,836	3,575	12,799

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix B (continued): 2016 Population Estimates by Age Group and County

	0-19	20-44	45-64	65+	Total
Pasquotank	9,953	12,887	10,324	6,451	39,615
Pender	14,348	17,064	17,179	10,306	58,897
Perquimans	2,803	3,250	3,848	3,526	13,427
Person	9,205	11,106	11,668	7,304	39,283
Pitt	46,973	68,696	40,068	21,890	177,627
Polk	3,774	4,463	6,105	6,079	20,421
Randolph	36,317	41,850	40,815	24,227	143,209
Richmond	11,410	13,788	12,092	7,764	45,054
Robeson	38,371	42,427	33,675	19,041	133,514
Rockingham	20,639	25,424	27,596	17,700	91,359
Rowan	34,850	42,541	38,749	23,389	139,529
Rutherford	15,213	18,083	19,359	13,650	66,305
Sampson	17,156	18,682	16,830	10,695	63,363
Scotland	9,075	10,863	9,286	6,026	35,250
Stanly	14,668	18,066	16,974	11,172	60,880
Stokes	9,898	12,387	14,380	9,226	45,891
Surry	17,188	20,058	20,652	14,151	72,049
Swain	3,522	4,233	3,752	2,680	14,187
Transylvania	6,196	8,263	9,182	9,830	33,471
Tyrrell	828	1,310	1,079	822	4,039
Union	69,167	67,012	63,119	27,242	226,540
Vance	11,669	12,848	12,154	7,755	44,426
Wake	285,241	380,439	269,636	113,827	1,049,143
Warren	4,010	5,276	5,866	4,737	19,889
Washington	2,714	3,031	3,589	2,798	12,132
Watauga	11,697	22,081	12,097	8,224	54,099
Wayne	32,635	40,445	32,098	19,298	124,476
Wilkes	15,780	18,879	19,932	14,043	68,634
Wilson	21,060	24,198	22,253	13,922	81,433
Yadkin	8,932	10,404	11,139	7,251	37,726
Yancey	3,616	4,613	5,071	4,322	17,622

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix C: 2016 Population Estimates by Race, Sex and County

	White Males	White Females	Minority Males	Minority Females	Total
North Carolina	3,606,068	3,715,786	1,339,970	1,494,865	10,156,689
Alamance	58,046	62,805	17,792	20,682	159,325
Alexander	17,106	17,112	1,844	1,208	37,270
Alleghany	5,226	5,331	215	173	10,945
Anson	6,372	5,809	6,738	6,200	25,119
Ashe	12,877	13,292	328	257	26,754
Avery	8,747	7,714	820	219	17,500
Beaufort	16,621	17,701	5,969	7,070	47,361
Bertie	3,551	3,538	6,174	6,186	19,449
Bladen	10,218	10,521	5,973	7,084	33,796
Brunswick	52,922	56,848	7,940	8,643	126,353
Buncombe	111,061	120,750	11,458	12,065	255,334
Burke	38,158	39,726	5,791	5,127	88,802
Cabarrus	75,952	78,661	22,202	24,758	201,573
Caldwell	37,659	38,507	2,837	2,784	81,787
Camden	4,371	4,344	835	873	10,423
Carteret	30,764	32,054	3,080	2,957	68,855
Caswell	7,483	7,308	4,099	3,852	22,742
Catawba	65,499	68,369	11,134	11,645	156,647
Chatham	27,953	30,084	5,516	6,271	69,824
Cherokee	12,900	13,682	643	658	27,883
Chowan	4,343	4,675	2,389	2,833	14,240
Clay	5,157	5,396	143	123	10,819
Cleveland	36,325	38,387	10,417	11,973	97,102
Columbus	17,602	18,430	10,186	10,117	56,335
Craven	38,586	36,583	13,527	14,161	102,857
Cumberland	93,972	86,267	72,473	80,826	333,538
Currituck	11,714	11,900	978	1,072	25,664
Dare	16,857	17,223	832	848	35,760
Davidson	70,575	73,252	9,812	10,865	164,504
Davie	18,767	19,564	1,670	1,972	41,973
Duplin	21,016	21,212	8,051	9,280	59,559
Durham	81,440	84,690	65,337	75,623	307,090
Edgecombe	10,224	11,065	14,468	17,536	53,293
Forsyth	122,141	130,839	54,465	64,169	371,614

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix C (continued): 2016 Population Estimates by Race, Sex and County

	White Males	White Females	Minority Males	Minority Females	Total
Franklin	23,117	22,809	9,067	9,666	64,659
Gaston	84,744	89,559	19,944	22,656	216,903
Gates	3,768	3,827	1,925	2,073	11,593
Graham	3,864	3,879	398	407	8,548
Granville	19,529	18,760	10,548	9,987	58,824
Greene	6,727	5,723	4,854	3,840	21,144
Guilford	147,072	157,175	100,539	117,210	521,996
Halifax	10,246	10,818	14,620	16,187	51,871
Harnett	47,792	48,134	17,161	17,812	130,899
Haywood	28,174	30,498	873	843	60,388
Henderson	51,394	55,477	3,319	3,568	113,758
Hertford	4,551	4,266	7,282	7,997	24,096
Hoke	13,917	13,417	12,392	13,382	53,108
Hyde	1,987	1,788	1,035	666	5,476
Iredell	71,756	72,864	13,318	14,591	172,529
Jackson	17,828	18,572	2,951	2,917	42,268
Johnston	76,245	78,654	17,459	18,736	191,094
Jones	3,224	3,243	1,460	1,698	9,625
Lee	22,321	22,991	6,879	7,555	59,746
Lenoir	15,940	16,360	11,575	13,557	57,432
Lincoln	37,225	37,816	3,010	3,024	81,075
McDowell	20,926	21,273	1,525	1,265	44,989
Macon	15,918	17,099	714	578	34,309
Madison	10,248	10,557	347	282	21,434
Martin	6,206	6,617	4,637	5,621	23,081
Mecklenburg	308,445	318,023	199,795	230,974	1,057,237
Mitchell	7,203	7,453	203	209	15,068
Montgomery	10,537	10,789	2,825	3,287	27,438
Moore	38,831	41,294	6,962	8,305	95,392
Nash	26,108	27,080	19,022	21,798	94,008
New Hanover	88,833	95,737	17,851	20,813	223,234
Northampton	4,047	4,154	5,748	6,217	20,166
Onslow	85,046	66,067	21,693	19,393	192,199
Orange	53,465	57,828	14,601	16,829	142,723
Pamlico	5,037	4,975	1,512	1,275	12,799

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

Appendix C (continued): 2016 Population Estimates by Race, Sex and County

	White Males	White Females	Minority Males	Minority Females	Total
Pasquotank	11,631	11,952	7,742	8,290	39,615
Pender	24,029	23,983	5,319	5,566	58,897
Perquimans	4,907	5,162	1,561	1,797	13,427
Person	13,567	14,238	5,469	6,009	39,283
Pitt	52,069	55,713	31,562	38,283	177,627
Polk	9,158	9,990	641	632	20,421
Randolph	63,715	65,637	6,883	6,974	143,209
Richmond	13,899	14,427	8,126	8,602	45,054
Robeson	20,955	21,864	43,372	47,323	133,514
Rockingham	34,968	37,056	9,061	10,274	91,359
Rowan	55,893	56,918	13,033	13,685	139,529
Rutherford	28,290	30,198	3,794	4,023	66,305
Sampson	21,408	21,487	9,808	10,660	63,363
Scotland	8,110	8,250	9,425	9,465	35,250
Stanly	25,621	26,162	4,674	4,423	60,880
Stokes	21,214	22,180	1,299	1,198	45,891
Surry	32,999	34,794	2,073	2,183	72,049
Swain	4,544	4,793	2,325	2,525	14,187
Transylvania	15,217	16,394	1,016	844	33,471
Tyrrell	1,195	1,184	979	681	4,039
Union	93,708	95,589	17,814	19,429	226,540
Vance	9,923	10,642	10,845	13,016	44,426
Wake	361,230	371,901	148,844	167,168	1,049,143
Warren	4,148	4,058	5,745	5,938	19,889
Washington	2,865	3,059	2,839	3,369	12,132
Watauga	25,999	25,963	1,095	1,042	54,099
Wayne	40,221	39,613	20,784	23,858	124,476
Wilkes	31,602	32,818	2,235	1,979	68,634
Wilson	22,437	23,689	16,183	19,124	81,433
Yadkin	17,684	18,121	978	943	37,726
Yancey	8,386	8,736	266	234	17,622

Population estimates are from the bridged-race population estimates obtained from the National Center for Health Statistics available online at www.cdc.gov/nchs/nvss/bridged_race/data_documentation.htm#vintage2017.

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